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CANADA
DEPARTMENT OF MINES AND RESOURCES

HON. T. A. CRERAR, MINISTER; CHARLES CAMSELL, DEPUTY MINISTER

MINES AND GEOLOGY BRANCH

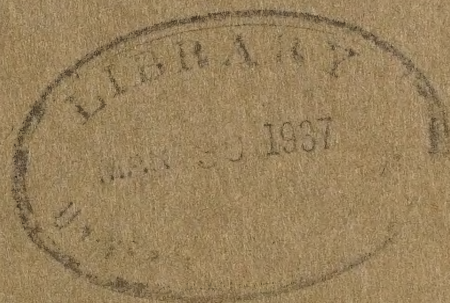
JOHN MCLEISH, DIRECTOR

BUREAU OF MINES

W. B. TIMM, CHIEF

CATALOGUE AND INDEX OF MINES
BRANCH REPORTS

E 16th ed. 3



OTTAWA
J. O. PATENAUDE, I.S.O.
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1937

Price, 25 cents.

No. 777

Canada Mines Bureau of -

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HON. T. A. CREER, MINISTER; CHARLES CAMSELL, DEPUTY MINISTER

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PREFACE

In presenting the sixteenth edition of the "Catalogue of Mines Branch Publications", the following comments may be of service, as explanatory of the more extended handling of the material now adopted.

Earlier editions of this catalogue were furnished with an "Alphabetical Guide to Catalogue", which referred by number to the individual, general, and detailed reports. Owing to the large number of investigations carried out during recent years, many of which appeared only in composite volumes of investigations of the various divisions of the branch, the arrangement thus adopted could not conveniently be used as a guide to this wealth of material. In the present edition, therefore, an index has been introduced arranged alphabetically under the minerals concerned, each mineral again being divided according to the aspect from which it has been investigated and then again, where possible, according to source of the material investigated. Reference is then made to the report, the page numbers concerning the specific investigations being prefixed where needed.

This will be the last edition of the catalogue to be confined solely to publications of the Mines Branch issued prior to the formation of the Department of Mines and Resources. Application for publications listed herein should be made to the Bureau of Mines, Mines and Geology Branch, Department of Mines and Resources, Ottawa.



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CATALOGUE OF REPORTS

- *1. Mining conditions in the Klondike, Yukon. By Eugene Haanel, 1902.
- *2. The great landslide at Frank, Alberta. 17 pp., 14 pls., 2 figs., 2 maps (not numbered). By R. G. McConnell and R. W. Brock, 1903.
- (E) *3. Report of the Commission appointed to investigate the different electro-thermic processes for the smelting of iron ores and the making of steel in operation in Europe. 223 pp., 24 pls., 64 figs. By Eugene Haanel, 1904.
- (F) *4. On the location and examination of magnetic ore deposits by magnetometric measurements. 132 pp., 13 pls., 54 figs. By Eugene Haanel, 1904.
- *5. Preliminary report on limestones, and the lime industry of Manitoba. 68 pp., 8 pls. By J. W. Wells, 1905.
- *8. Preliminary report on the industrial value of the clays and shales of Manitoba. 41 pp., 9 pls. By J. W. Wells, 1905.
- *9. Preliminary report on the raw materials, manufacture, and uses of hydraulic cements in Manitoba. 70 pp., 7 pls. By J. W. Wells, 1905.
- (E) *10. Mica: its occurrence, exploitation, and uses. 148 pp., 1 pl., 38 figs., 2 maps (not numbered). By Fritz Cirkel, 1905.
- (F) *264. (See also Repts. Nos. 118 and 701.)
- *11. Asbestos: its occurrence, exploitation, and uses. 170 pp., 19 pls., 1 map (not numbered). By Fritz Cirkel, 1905. (See also Repts. Nos. 69 and 707.)
- *12. Report of the Commission appointed to investigate the zinc resources of British Columbia and the conditions affecting their exploitation. 399 pp., 68 pls., 32 figs., 2 maps (not numbered). By W. R. Ingalls, 1905.
- 16. Final report of the experiments made at Sault Ste. Marie, under Government auspices, in the smelting of Canadian iron ores by the electro-thermic process. (This includes the Preliminary Report published in 1906.) 150 pp., 23 pls., 21 figs. By Eugene Haanel, 1907.
- 17. The present and prospective output of the mines of the silver-cobalt ores of the Cobalt district. 13 pp. By Eugene Haanel, 1907.
- (E) *18. Graphite: its properties, occurrence, refining, and uses. 307 pp., 20 pls., 52 figs., 44 tables, 9 maps (not numbered). By Fritz Cirkel, 1905.
- (F) 202.
- (E) *19. Peat and lignite: their manufacture and uses in Europe. 247 pp., 34 pls., 228 figs. By E. Nystrom, 1908.
- (F) *198.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- *20. Iron ore deposits of Nova Scotia (Part I). 226 pp., 63 pls. (including maps). By J. E. Woodman, 1909.
- *21. Summary Report of the Mines Branch for the fiscal year 1907-8. 98 pp., 1909.
 Director's general report. By Eugene Haanel.
 Iron ore deposits of Vancouver and Texada islands. By E. Lindeman.
 Alleged iron ore deposits of Ontario and Quebec. By B. F. Haanel.
 Work in Chemical Laboratory, 1907-8. By F. G. Wait.
 Report on visit to gas producer plants in and around New York. By B. F. Haanel.
 Resources and statistics, 1907-8. By John McLeish.
 Comparison of induction furnaces employed for production of steel. By A. Grönwall.
 Results of experiments in intensified nitrification by means of peat beds. By Müntz and Lainé.
- 22. The examination of some iron ore deposits in the districts of Thunder Bay and Rainy River in the province of Ontario. 65 pp., 7 pls., 18 figs. By F. Hille, 1908.
- *23. Iron ore deposits along the Ottawa (Quebec side) and Gatineau rivers. 147 pp., 5 pls., 15 figs., 2 maps—Nos. 53 and 54. By Fritz Cirkel, 1909.
- 24. Report on the mining and metallurgical industries of Canada, 1907-8. 972 pp., 75 pls., 16 figs., 6 maps (not numbered). (See Rept. No. 597.)
- (E) *25. The tungsten ores of Canada. 56 pp., 10 pls., 1 fig. By
- (F) *156. T. L. Walker, 1909.
- 26. Annual report on the mineral production of Canada, 1906.
- 26b. 196 pp. By John McLeish, 1909.
- 27. Preliminary report on the mineral production of Canada, 1907. By John McLeish.
- 27a. Preliminary report on the mineral production of Canada, 1908. By John McLeish.
- *28. Summary report of the Mines Branch for the nine months ending December 31, 1908. 93 pp., 1909.
 Director's general report. By Eugene Haanel.
 Coal tests at McGill University. By J. B. Porter.
 Report of work in Chemical Laboratories, 1908. By F. G. Wait.
 Report of Division of Mineral Resources and Statistics. By John McLeish.
 Report of work done by Assay Office, 1908. By G. Middleton.
 Tungsten ores of Canada. By T. L. Walker.
 Chrome ores and asbestos in province of Quebec. By F. Cirkel.
 Iron ores of Nova Scotia. Preliminary report. By J. E. Woodman.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- Iron ore deposits in New Brunswick and northwestern Ontario. By E. Lindeman.
- Magnetic survey of the Huron mountain, Temagami Forest Reserve. By B. F. Haanel.
- Magnetite deposits in Mayo township, Hastings county, Ont. By Howells Fréchette.
- Smelting of titaniferous iron ores in electric furnace at Welland, Ont. By B. F. Haanel.
- Coal samples for testing Canadian coals at McGill University. By T. C. Denis.
- Tests made in Scotland, on oil-shale from New Brunswick, etc. By R. W. Ells.
- Preliminary report on peat bogs of Canada. By E. Nystrom and A. Anrep.
- Preliminary report on coal and coal mining in Nova Scotia. By J. G. S. Hudson.
- Preliminary report on gypsum deposits and industry of Nova Scotia and New Brunswick. By W. F. Jennison.
- Report on visit to some producer gas plants in and around Berlin, Germany. By B. F. Haanel.
- Appendix I. Progress of electric smelting in Norway. By O. Stalhane.
- Appendix II. Mineral production of Canada, 1907-8. By John McLeish.
- (E) *29. Report on the chrome iron ore deposits in the Eastern Townships, province of Quebec. 141 pp., 11 pls., 15 figs., 1 map—No. 57. (Appendices: I—Notes on the metallurgy of chromium, by W. Borchers; II—Experiments with chromite at McGill University under the direction of J. B. Porter.) 1909.
- (F) *226.
30. Investigation of the peat bogs and peat fuel industry of Canada during the season 1908-9. (Bulletin No. 1.) 25 pp., 6 maps—Nos. 36, 37, 38, 39, 40, and 41. By Erik Nystrom and A. Anrep, 1909.
32. Investigation of an electric shaft furnace, Domnarfvet, Sweden. 38 pp., 4 pls., 10 figs. By Eugene Haanel, 1909.
47. Iron ore deposits of Vancouver and Texada islands, British Columbia. 29 pp., 5 maps—Nos. 48, 49, 50, 51, and 52. By E. Lindeman, 1910.
- (E) *55. Joint report (with the Geological Survey) on the bituminous or oil-shales of New Brunswick and Nova Scotia, also on the oil-shale industry of Scotland, Part I. Economics. 36 pp., 15 pls., 6 figs. By R. W. Ells. With appendix, The technology of the Scottish shale oil industry. By W. A. Hamor. 1910. Part II. Geological position and character of the oil shale deposits of Canada. 75 pp. By R. W. Ells. With appendix, Oil-shale found on Melville island (Arctic ocean) 1909. 1910 (dated 1909).
- (F) *56.
- Geological Survey Nos.
(E) 1107.
(F) 1108.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

58. Annual report on the mineral production of Canada during the calendar years 1907 and 1908. 286 pp. By John McLeish, 1910.

NOTE.—*The following parts were separately printed and issued in advance of the Annual Report for 1907 and 1908.*

- 31. Cement.
 - 42. Iron and steel.
 - 43. Chromite.
 - 44. Asbestos.
 - *45. Coal, coke, and peat.
 - 46. Natural gas and petroleum.
- *59. Report of analyses of ores, non-metallic minerals, fuels, etc., made in the chemical laboratories during the years 1906, 1907, 1908, 1909. 126 pp., 2 pls., with appendix. Arranged by F. G. Wait. Appendix—Description of commercial methods and apparatus for the analyses of oil-shales. By H. A. Leverin. 1910.
62. Preliminary report on the mineral production of Canada, 1909. By John McLeish, 1910.
- *63. Summary report of the Mines Branch for the calendar year 1909. 176 pp., 4 pls. 1910.
- Director's general report. By Eugene Haanel. Coal tests at McGill University. By J. B. Porter. Report on work in Chemical Laboratories, 1909. By F. G. Wait.
 - Report of Division of Mineral Resources and Statistics for 1909. By John McLeish.
 - Report covering operations of Assay Office, Vancouver, B.C. By G. Middleton.
 - Molybdenum ores of Canada. By T. L. Walker.
 - Magnetic concentration of iron ores from Quebec and New Brunswick; copper-nickel ores from Ontario. By G. C. Mackenzie.
 - Investigation of some manganese ore deposits in Nova Scotia and New Brunswick. By T. C. Denis.
 - Investigation of iron ores and metallurgical limestones in Nova Scotia. By J. E. Woodman.
 - Magnetic survey of some mining locations at Timagami, Ont. By E. Lindeman.
 - Report on copper mining industry in Quebec. By A. W. G. Wilson.
 - Nicolet antimony mine, Quebec. By A. W. G. Wilson.
 - Iron locations in Spalding township, Megantic county, Que. By A. W. G. Wilson.
 - Notes on an occurrence of talc and soapstone in Megantic county, Que. By A. W. G. Wilson.
 - Examination of certain iron ore properties in northeastern Ontario. By Howells Fréchette.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

Gypsum resources of Nova Scotia. By W. F. Jennison.
 Report on further investigation of asbestos deposits in
 province of Quebec. By F. Cirkel.
 Investigation of reported iron ore occurrences in Ontario,
 Quebec, and New Brunswick. By B. F. Haanel.
 Investigation of Harris peat gas process. By B. F. Haanel.
 Preliminary report on peat bogs of Canada. By A. Anrep.
 Data on coal mining in Nova Scotia. By J. G. S. Hudson.
 Accountant's statement. By John Marshall.
 Appendix I. Preliminary report on mineral production
 of Canada in 1909. By John McLeish.
 Appendix II. Description of commercial methods for
 the analysis of oil-shales. By H. A. Leverin.
 Appendix III. United States report on prevention of
 mine explosions. (Oct. 22, 1908.)
 Appendix IV. Examination of magnetic ore deposits.
 By Howells Fréchette.

- (E) *67. Iron ore deposits of the Bristol mine, Pontiac county, Que.
 (F) 314. (Bulletin No. 2.) 15 pp., 2 pls., 2 figs., 2 maps—Nos. 60
 and 61. By E. Lindeman and G. C. Mackenzie, 1910.
- (E) *68. Recent advances in the construction of electric furnaces for
 (F) *263. the production of pig iron, steel, and zinc. (Bulletin
 No. 3.) 76 pp., 1 pl., 17 figs. By Eugene Haanel, 1910.
- (E) *69. Chrysotile-asbestos: its occurrence, exploitation, milling, and
 (F) *81. uses. Appendix: The testing of heat-insulating materials.
 By Frederick Bacon, 1910. 316 pp., 66 pls., 88 figs.,
 2 maps—Nos. 78 and 86. (Second edition, enlarged.)
 By Fritz Cirkel, 1911. (*See also* Rept. No. 707.)
- *71. Investigation of the peat bogs and peat industry of Canada
 during the season 1909-10; (to which is appended A.
 Larson's paper on Dr. M. Ekenberg's wet-carbonizing
 process, from *Teknisk Tidskrift* No. 12, December 26,
 1908—translation by A. Anrep, Jr.; also a translation of
 Lieut. Ekelund's pamphlet entitled "A solution of the
 peat problem", 1909, describing the Ekelund process for
 the manufacture of peat powder, by H. A. Leverin).
 44 pp., 17 pls., 6 figs., 6 maps—Nos. 72, 73, 74, 75, 76,
 and 77. (Second edition, enlarged.) The first edition
 does not contain the translation of Lieut. Ekelund's pam-
 phlet by H. A. Leverin, 1911.
82. Magnetic concentration experiments. 28 pp., 4 figs. By
 G. C. Mackenzie, 1910.
- (E) *83. An investigation of the coals of Canada with reference to their
 (F) *308. economic qualities, as conducted at McGill University
 under the authority of the Dominion Government. By
 J. B. Porter, R. J. Durley, and others.
 *Vol. I—Coal washing and coking tests. 233 pp., 46 pls.,
 31 figs., 5 maps—Nos. 95, 96, 97, 98, and 99. 1912.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

*Vol. II—Boiler and gas producer tests. 189 pp., 17 pls., 25 figs, 1912.

Appendices:

*Vol. III

Appendix I—Detailed results of the coal washing trials. 168 pp. By J. B. Porter, 1912.

*Vol. IV

Appendix II—Detailed results of the boiler trials. 352 pp. By R. J. Durley, 1913.

*Vol. V

Appendix III—Detailed results of the gas producer trials. 318 pp. By R. J. Durley, 1913.

*Vol. VI

Appendix IV—Manufacture and testing of coke. 75 pp. By J. B. Porter and E. Stansfield, 1912.

Appendix V—Work of the chemical laboratory. 42 pp. By E. Stansfield, 1912.

NOTE.—*Vols. I and II were printed separately in the following parts:*

Vol. I—

Part I—Introductory. By J. B. Porter.

Part II—The coal fields of Canada. By T. C. Denis.

Part III—Collecting the coal samples. By T. C. Denis and E. Stansfield.

Part IV—Sampling in the testing plant and laboratory. By J. B. Porter.

Part V—Mechanical purification of coal, commonly called coal washing. By J. B. Porter.

Part VI—Manufacture and testing of coke. By E. Stansfield and J. B. Porter.

Vol II—

Part VII—Boiler tests. By R. J. Durley.

Part VIII—Gas producer tests. By R. J. Durley.

Part IX—Work of the chemical laboratory. By E. Stansfield.

- (E) *84. Gypsum deposits of the Maritime Provinces of Canada
(F) *233. (including the Magdalen islands). 171 pp., 36 pls., 19 figs., 3 maps—Nos. 64, 65, and 66. By W. F. Jennison. 1912.
(See also Repts. Nos. 245 and 714.)
88. Annual report on the mineral production of Canada, 1909. 291 pp. By John McLeish, 1911.

NOTE.—*The following parts were separately printed and issued in advance of the Annual Report for 1909.*

*79. Iron and steel.

*80. Coal and coke.

85. Cement, lime, clay products, stone, and other structural materials.

89. Proceedings of conference on explosives, 1911. (Fourth edition.) 49 pp., 1911.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- *90. The exploitation of our peat bogs for the production of fuel for domestic and industrial purposes. (Reprint of presidential address delivered at the fourth annual meeting of the American Peat Society held at Ottawa, July 25, 1910.) 8 pp. By Eugene Haanel, 1911.
92. Report of the explosive industry in the Dominion of Canada. (Fourth edition.) 18 pp. By Captain Arthur Desborough. 1911.
- (E) *93. Molybdenum ores of Canada. 64 pp., 14 pls., 6 figs. By
(F) *197. T. L. Walker, 1911.
- (E) *100. The building and ornamental stones of Canada: Vol. I,
(F) *100a. Ontario. 376 pp., 77 pls., 21 figs. By W. A. Parks, 1912.
102. Preliminary report on the mineral production of Canada, 1910. By John McLeish, 1911.
- *103. Summary report of the Mines Branch for the calendar year 1910. 237 pp., 1 fig., 1 map—No. 94. 1911.
Director's general report. By Eugene Haanel.
Report of Chemical Laboratory for 1910. By F. G. Wait.
Report of the Division of Mineral Resources for 1910. By John McLeish.
Report of operations of Assay Office, Vancouver, B.C. By G. Middleton.
Report of Fuel Testing Station, 1910. By B. F. Haanel.
Report of Fuel Testing Laboratory, 1910. By E. Stansfield.
Report of Ore Dressing and Metallurgical Laboratory, 1910. By G. C. Mackenzie.
Molybdenum ores of Ontario and British Columbia. By T. L. Walker.
Copper mining industry in Ontario, 1910. By A. W. G. Wilson.
Austin Brook iron-bearing district, N.B. By E. Lindeman.
Investigation of iron ore deposits at Torbrook, Annapolis county, N.S.; and magnesite deposits, Grenville township, Argenteuil county, Que. By Howells Fréchette.
Investigation of reported discovery of tin ore in the vicinity of Arnprior, Ont. By L. H. Cole.
Cobalt and surrounding districts, province of Ontario. By L. H. Cole.
Mica deposits of Ontario and Quebec. By H. S. de Schmid.
Preliminary report on building and ornamental stones of Ontario south of the Ottawa and French rivers. By W. A. Parks.
Investigation of peat bogs of Canada, and manufacture of peat fuel at Alfred, Ont. By A. Anrep, Jr.
Report on tests of blaugas. By E. Stansfield.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- Report on explosives industry in Canada. By A. Desborough.
- Report on explosion of "Verite" at works of General Explosives Company, Ltd., Hull, Que. By J. G. S. Hudson.
- Report on explosion of "Blaster's Friend", at works of Dominion Explosives Company, Ltd., Sand Point, Renfrew county, Ont. By J. G. S. Hudson.
- Investigation of coal mine disaster at Bellevue mine, near Frank, Alberta. By J. G. S. Hudson.
- Report of Draughting Division. By J. G. S. Hudson.
- Appendix I. Preliminary report on mineral production of Canada during 1910, with revised statistics for 1909. By John McLeish.
- Appendix II. Conference on proposed legislation to regulate manufacture, importation, and testing of explosives. By Eugene Haanel.
- Appendix III. The Explosives Act. 1910-11.
- *104.** Catalogue of publications of the Mines Branch, 1907-11, containing tables of contents of the various technical reports, monographs, bulletins, etc., together with a list of magnetometric survey maps, working plans, etc.; including also a digest of technical memoirs and the annual summary reports of the Superintendent of Mines issued by the Department of the Interior, 1902-1906. 135 pp., 1912.
- (E) **105.** Austin Brook iron-bearing district, New Brunswick. 15 pp.,
- (F) ***219.** 3 pls., 5 figs., 3 maps—Nos. 106, 107, and 108. By E. Lindeman, 1913.
- 110.** Western portion of Torbrook iron ore deposits, Annapolis county, N.S. (Bulletin No. 7.) 13 pp., 4 pls., 1 map—No. 141. By Howells Fréchette, 1912.
- 111.** Diamond drilling at Point Mamainse, Ontario. (Bulletin No. 6.) 59 pp., 5 pls., 1 fig., 1 map—No. 112. By A. C. Lane, with introductory by A. W. G. Wilson, 1912.
- (E) ***118.** Mica: its occurrence, exploitation, and uses. (Second edition.)
- (F) ***264.** 411 pp., 38 pls., 67 figs., 22 maps—Nos. 119 to 140 inclusive. By H. S. de Schmid, 1912. (*See also* Rept. No. 701.)
- *142.** Summary report of the Mines Branch for the calendar year 1911. 201 pp., 16 pls., 6 figs., 1 map—No. 166. 1912.
- Director's general report. By Eugene Haanel.
- Report of chemical laboratories, 1911. By F. G. Wait.
- Report of Division of Mineral Resources and Statistics, 1911. By John McLeish.
- Assay Office report for 1911. By G. Middleton.
- Report of Fuels and Fuel Testing Division, 1911. By B. F. Haanel.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- Investigation of peat bogs, 1911. By A. Anrep.
 Report of chemical laboratory of Fuel Testing Station, 1911. By E. Stansfield.
 Report of Ore Dressing and Metallurgical Laboratory, 1911. By G. C. Mackenzie.
 Building and ornamental stones of Maritime Provinces. By W. A. Parks.
 Report on Sudbury nickel field. By A. P. Coleman.
 Copper and pyrites. By A. W. G. Wilson.
 Iron ore deposits along Central Ontario railway. By E. Lindeman.
 Calabogie iron-bearing district. By E. Lindeman.
 Magnetometric survey of a nickeliferous pyrrhotite deposit in Sudbury district. 1 map—No. 166. By E. Lindeman.
 Investigation of Canadian market for various mineral products in a crude or partially prepared state. By Howells Fréchette.
 Gypsum and salt industries of central and western Canada. By L. H. Cole.
 Phosphate and feldspar deposits of Ontario and Quebec.
 Determination of moisture in fuels. By E. Stansfield.
 Report of tests on pyrene. By E. Stansfield.
 An electrically heated tube furnace suitable for making ultimate organic analyses. By E. Stansfield.
 Report on explosion of explosives at Sand Point, Ont., Beloeil and Rigaud, Que. By J. G. S. Hudson.
 Accountant's statement, 1911. By John Marshall.
 Appendix I. Preliminary report on mineral production of Canada, 1911. By John McLeish.
 Appendix II. On explosives.
- *143. Annual report on the mineral production of Canada, 1910. 328 pp. By John McLeish, 1912.
- NOTE.—*The following parts were separately printed and issued in advance of the Annual Report for 1910.*
- *114. Cement, lime, clay products, stone, and other structural materials.
 *115. Iron and steel.
 *116. Coal and coke.
 117. General summary of the mineral production.
- (E) *145. Magnetic iron sands of Natashkwan, Saguenay county,
 (F) *149. Quebec. 49 pp., 22 pls., 9 figs., 3 maps—Nos. 146, 147, and 148. By G. C. Mackenzie, 1913 (marked 1912).
- *150. Preliminary report on the mineral production of Canada, 1911. By John McLeish, 1912.
- (E) *151. Investigation of the peat bogs and peat industry of Canada,
 (F) *180. 1910-11. (Bulletin No. 8.) 53 pp., 19 pls., 1 fig., 12 maps—Nos. 113, 152, 153, 157 to 165 inclusive. By A. Anrep, 1913.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- (E) *154. The utilization of peat fuel for the production of power,
(F) *155. being a record of experiments conducted at the Fuel Testing Station, Ottawa, 1910-11-12. 140 pp., 10 pls., 17 figs., 17 charts. By B. F. Haanel, 1912.
- (E) *167. Pyrites in Canada: its occurrence, exploitation, dressing, and
(F) *169. uses. 202 pp., 27 pls., 29 figs., 1 map—No. 168. By A. W. G. Wilson. 1913 (marked 1912).
- (E) *170. The nickel industry: with special reference to the Sudbury
(F) *179. region, Ontario. 198 pp., 63 pls., 14 figs., 8 maps—Nos. 171, 172, 173, 174, 175, 176, 177, and 178. By A. P. Coleman, 1913.
- (E) 184. Magnetite occurrences along the Central Ontario railway.
(F) *195. 23 pp., 9 pls., 19 maps—Nos. 185-193a, 194, and 204. By E. Lindeman, 1913.
- (E) *201. Annual report on the mineral production of Canada during
(F) *265. the calendar year 1911. 316 pp. By John McLeish, 1913.

NOTE.—*The following parts were separately printed and issued in advance of the Annual Report for 1911.*

181. Cement, lime, clay products, stone, and other structural materials.
- *182. Iron and steel.
183. General summary of the mineral production.
199. Copper, gold, lead, nickel, silver, zinc, and other metals.
- *200. Coal and coke.
- (E) 203. The building and ornamental stones of Canada: Vol. II,
(F) *280. Maritime Provinces. 264 pp., 45 pls., 9 figs. By W. A. Parks, 1914.
- (E) 209. The copper smelting industry of Canada. 184 pp., 43 pls.,
(F) *214. 39 figs., 4 maps—Nos. 210, 211, 212, and 213. By A. W. G. Wilson, 1914 (marked 1913).
216. Preliminary report on the mineral production of Canada, 1912. By John McLeish, 1913.
217. Iron ore occurrences in Canada.
Vol. I—Description of principal iron ore mines. 71 pp., 23 pls., 1 map—No. 445. Appendix consisting of 22 maps enclosed in a special case—Nos. 106, 107, 185, 185a, 186, 186a, 190, 190a, 191, 191a, 192, 192a, 205, 206, 207, 208, 208a, 208b, 208c, 340, 340a, 443. 1917.
Vol II—Description of iron ore occurrences. 222 pp., 1 map—No. 445. Appendix consisting of 33 maps enclosed in a special case—Nos. 187, 187a, 188, 188a, 189, 193, 193a, 194, 249 to 253, 261, 311 312, 313, 341, 341a, 342, 342a, 343, 343a, 405, 409, 410, 416, 438, 439, 441, 442, 444, 446. 1918.
Compiled by E. Lindeman and L. L. Bolton, with introductory by A. H. A. Robinson.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- (E) *222. Lode mining in Yukon: an investigation of the quartz deposits in the Klondike division. 214 pp., 40 pls., 35 figs., 6 maps—Nos. 220, 221, 234 to 237. By T. A. MacLean, 1914.
- (F) *223.
- (E) 224. Summary report of the Mines Branch for the calendar year 1912. 174 pp., 16 pls., 1 fig., 3 maps—Nos. 215, 220, and 221. 1913.
- Director's general report. By Eugene Haanel.
- Report of Chemical Laboratory, 1912. By F. G. Wait.
- Report of Division of Mineral Resources and Statistics. By John McLeish.
- Assay Office report, 1912. By G. Middleton.
- Fuel and Fuel Testing Division. Report on a test of lignite coal from Consumer's Coal Co., Moosejaw, Sask. By B. F. Haanel.
- Sampling of lignitic and semi-bituminous coals of Alberta for gas producer tests. By J. G. S. Hudson.
- Report of chemical laboratory of Fuel Testing Station. By E. Stansfield.
- Investigation of peat bogs. By A. Anrep.
- Petroleum and natural gas resources of Canada. By F. G. Clapp and L. G. Huntley.
- Report of Ore Dressing and Metallurgical Division. By G. C. Mackenzie.
- Investigation of magnetic iron sands at Natashkwan, Que. By G. C. Mackenzie.
- Equipment of new Ore Dressing Laboratories, 1912. By G. C. Mackenzie.
- Report on Parker-Lanius process of extracting gold from free-milling and refractory ores. By G. C. Mackenzie.
- Building and ornamental stones of Quebec. By W. A. Parks.
- Work on pyrites and copper. By A. W. G. Wilson.
- Report on mineral deposits in vicinity of St. Mary Bay, Nova Scotia. By A. W. G. Wilson.
- Moose Mountain iron-bearing district, Ont. By E. Lindeman.
- Investigation of Canadian market for various mineral products in a crude or partially prepared state. By Howells Fréchette.
- Continued examination of the phosphate and feldspar deposits of Ontario and Quebec. By H. S. de Schmid.
- Further investigation of gypsum and salt industries of Canada. By L. H. Cole.
- Preliminary report of investigations at Research Laboratory of applied electro-chemistry, Queen's University, Kingston, for Mines Branch. (Metal cobalt and its alloys.) By H. T. Kalmus.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- Recent developments in electro-thermic production of iron and steel, 1911-12. By H. T. Kalmus.
- Lode mining in Yukon: investigation of quartz deposits in Klondike division. By T. A. MacLean.
- Accountant's statement, 1912. By John Marshall.
- Appendix I. Preliminary report on mineral production of Canada, 1912. By John McLeish.
- Appendix II. Legislative administration of mineral lands in Canada.
- *227. Sections of the Sydney coal fields. 6 pp., 15 pls., 1 map—No. 228. By J. G. S. Hudson, 1913.
- *229. Summary report of the petroleum and natural gas resources of Canada. By F. G. Clapp, 1912. (*See* No. 224.)
- (E) *230. Economic minerals and mining industries of Canada, 77 pp.,
(F) *231. 19 pls., 1 map—No. 232. 1913. (*See also* Rept. No. 611).
- (E) 245. Gypsum in Canada: its occurrence, exploitation, and technology. 256 pp., 30 pls., 27 figs., 6 maps—Nos. 239, 240,
(F) *246. 241, 242, 243, and 244. By L. H. Cole, 1914.
- (E) 254. Magnetite occurrences near Calabogie, Renfrew county,
(F) 255. Ontario. 16 pp., 1 fig., 5 maps—Nos. 249, 250, 251, 252, and 253. By E. Lindeman, 1914.
- (E) 259. Researches on cobalt and cobalt alloys conducted at Queen's
(F) 260. University, Kingston, Ontario, for the Mines Branch of the Department of Mines.
- Part I—Preparation of metallic cobalt by reduction of the oxide. 36 pp., 8 pls., 4 figs. By H. T. Kalmus, assisted by C. W. Day, C. Harper, A. Savell, and R. Wilcox, 1913.
262. Annual report on the mineral production of Canada during the calendar year 1912. 339 pp. By John McLeish, 1914.
- NOTE—*The following parts were separately printed and issued in advance of the Annual Report for 1912.*
238. General summary of the mineral production.
- (E) *247. (F) *287. Iron and steel.
- *256. Copper, gold, lead, nickel, silver, zinc, and other metals.
257. Cement, lime, clay products, stone, and other structural materials.
- *258. Coal and coke.
- (E) 266. Investigation of the peat bogs and peat industry of Canada,
(F) *267. 1911 and 1912. 47 pp., 29 pls., 6 figs., 11 maps—Nos. 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, and 278. By A. Anrep, 1915.
- (E) 279. The building and ornamental stones of Canada: Vol. III,
(F) *389. Quebec. 304 pp., 52 pls., 12 figs. By W. A. Parks, 1915.
- (E) *281. Preliminary report on the bituminous sands of northern
(F) *282. Alberta. 92 pp., 55 pls., 5 figs., 1 map—No. 284. By S. C. Ells, 1915 (marked 1914). (*See also* Rept. No. 632.)

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

283. Preliminary report on the mineral production of Canada, 1913. By John McLeish, 1914.
- (E) 285. Summary report of the Mines Branch for the calendar year 1913. 214 pp., 51 pls., 24 figs., 1 map—No. 284. 1915.
- (F) *286. Director's general report. By Eugene Haanel.
 Progress report on monograph on copper mines and copper mining. By A. W. G. Wilson.
 Investigation of alleged platinum discoveries in vicinity of Nelson, B.C. By A. W. G. Wilson.
 Hall process for desulphurizing ores. By A. W. G. Wilson.
 Iron ore occurrences in Cape Breton. By E. Lindeman.
 Lode mining in Yukon. By T. A. MacLean.
 Investigation of Canadian market for various mineral products in a crude or partially prepared state. By Howells Fréchette.
 White mica occurrences in Tête Jaune Cache and Big Bend districts, B.C. By H. S. de Schmid.
 Saline springs of Manitoba. By L. H. Cole.
 Bituminous sands of northern Alberta. By S. C. Ells.
 Building and ornamental stones of Quebec. By W. A. Parks.
 Work of Ore Dressing and Metallurgical Division for 1913. By W. B. Timm.
 Investigation of the magnetic iron sands at Natashkwan, Que. By C. S. Parsons.
 Investigation of processes for smelting zinc ores. By W. R. Ingalls.
 Researches on cobalt and cobalt alloys at Research Laboratory of applied electro-chemistry and metallurgy, Queen's University, Kingston, for Mines Branch. (Preparation of metallic cobalt by reduction of the oxide.) By H. T. Kalmus.
 Work at Fuel Testing Station, 1913. By B. F. Haanel.
 Results of investigation of five lignite samples obtained from Alberta. By B. F. Haanel.
 Report of chemical laboratory of Fuel Testing Station. By E. Stansfield.
 Investigation of peat bogs. By A. Anrep.
 Report of Mineral Resources and Statistics Division, 1913. By John McLeish.
 Appendix I. Preliminary report on mineral production of Canada, 1913. By John McLeish.
 Appendix II. Description of Mines Branch laboratories. By F. G. Wait, B. F. Haanel, and W. B. Timm.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- (E) **291.** The petroleum and natural gas resources of Canada. By
(F) ***292.** F. G. Clapp and others, 1915.
Vol. I—Technology and exploitation. 378 pp., 21
pls., 25 figs., 1 map—No. 293.
Vol. II—Occurrence of petroleum and natural gas in
Canada. 404 pp., 31 pls., 40 figs., 6 maps—Nos.
294, 295, 296, 297, 298, and 302.
Vol. II also printed separately in two parts as follows:—
Part 1, Eastern Canada. 245 pp., 12 pls., 23 figs.,
3 maps—Nos. 294, 295, and 296.
Part 2, Western Canada. 159 pp., 19 pls., 17 figs.,
3 maps—Nos. 297, 298, and 302.
- (E) **299.** Peat, lignite, and coal: their value as fuels for the production
(F) ***300.** of gas and power in the by-product recovery producer.
261 pp., 29 pls., 39 figs. By B. F. Haanel, 1915.
- (E) **303.** Moose Mountain iron-bearing district, Ontario. 14 pp.,
(F) **304.** 2 figs., 8 maps—Nos. 205, 205a, 206, 207, 208, 208a, 208b,
208c—in separate envelope. By E. Lindeman, 1914.
- (E) **305.** The non-metallic minerals used in the Canadian manufacturing
(F) ***306.** industries. 199 pp. By Howells Fréchette, 1914.
- (E) **309.** Researches on cobalt and cobalt alloys conducted at Queen's
(F) **310.** University, Kingston, Ontario, for the Mines Branch
of the Department of Mines.
Part II—The physical properties of the metal cobalt.
48 pp., 14 pls., 8 figs. By H. T. Kalmus and C.
Harper, 1914.
- (E) **320.** Annual report on the mineral production of Canada during
(F) **321.** the calendar year 1913. 363 pp. By John McLeish,
1915.
- NOTE.—*The following parts were separately printed and issued in advance of
the Annual Report for 1913.*
- 315.** Iron and steel.
***316.** Coal and coke.
317. Copper, gold, lead, nickel, silver, zinc, and other metals.
318. Cement, lime, clay products, stone, and other structural
materials.
319. General summary of the mineral production.
- *322.** Economic minerals and mining industries of Canada. (Panama-
Pacific edition.) 78 pp., 19 pls., 1 map—No. 232. 1915.
(*See also* No. 611.)
- (E) **323.** The products and by-products of coal. 51 pp. By E.
(F) ***324.** Stansfield and F. E. Carter, 1915.
- (E) **325.** The salt industry of Canada. 135 pp., 9 pls., 25 figs., 4 maps—
(F) ***326.** Nos. 327, 328, 329, and 330. By L. H. Cole, 1915. (*See
also* No. 716.)
- 331.** Results of the investigation of six lignite samples obtained
from the province of Alberta. 110 pp., 5 pls., 29 figs.
By B. F. Haanel and John Blizard, 1915.
- *333.** Preliminary report on the mineral production of Canada,
1914. By John McLeish, 1915.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- (E) 334. Researches on cobalt and cobalt alloys conducted at Queen's
(F) *335. University, Kingston, Ontario, for the Mines Branch
of the Department of Mines.
Part III—Electro-plating with cobalt. 69 pp., 4 figs. By H.
T. Kalmus, assisted by C. Harper and A. Savell, 1915.
336. Notes on clay deposits near McMurray, Alberta. (Bulletin
No. 10.) 15 pp. By S. C. Ells, 1915.
- *337. Catalogue of Mines Branch publications—(8th to 11th edi-
tions).
338. An investigation of the coals of Canada with reference to
their economic qualities as conducted at McGill University,
Montreal, under the authority of the Dominion Government.
Extra volume (Vol. VII) supplementing report No. 83.
Weathering of coal. 194 pp., 6 pls., 65 figs. By
J. B. Porter, 1916.
- (E) 344. Electrothermic smelting of iron ores in Sweden. 65 pp.,
(F) 345. 7 pls., 5 figs. By A. Stansfield, 1915.
- (E) 346. Summary report of the Mines Branch, Department of Mines,
(F) 347. for the calendar year ending December 31, 1914. 232 pp.,
12 pls., 15 figs., 1916.
Director's general report. By Eugene Haanel.
Examination of certain copper deposits in Quebec. By
A. W. G. Wilson.
The Atikokan and Matawin iron ranges. By E. Lindeman.
The Atikokan iron range. By A. H. A. Robinson.
Limestones of the province of Quebec. By Howells
Fréchette.
Investigation of miscellaneous non-metallic minerals.
By H. S. de Schmid.
Investigation of sand areas of Quebec. By L. H. Cole.
Bituminous sands of northern Alberta. By S. C. Ells.
Building and ornamental stones of Prairie Provinces.
By W. A. Parks.
Report of Ore Dressing and Metallurgical Division.
By G. C. Mackenzie.
Electro-plating with cobalt. By H. T. Kalmus.
Chemical laboratories of Fuel Testing Station. By E.
Stansfield.
Investigation of peat bogs, 1914. By A. Anrep.
Report on mechanical work done at Fuel Testing Station,
1914. By A. W. Mantle.
Chemical Laboratory, Sussex St. By F. G. Wait.
Report of Division of Mineral Resources and Statistics,
1914. By John McLeish.
Report of investigation of Hillcrest Mine disaster. By
J. G. S. Hudson.
Appendix I. Preliminary report on mineral production of
Canada, 1914. By John McLeish.
Appendix II. Explosives Act. 4-5, George V.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- (E) *351. Investigation of the peat bogs and the peat industry of Canada,
 (F) *352. 1913-14. (Bulletin No. 11.) 185 pp., 92 pls., 66 figs.,
 30 maps—Nos. 354 to 383 inclusive. By A. Anrep,
 1915.
- (E) 384. Annual report on the mineral production of Canada during
 (F) *415. the calendar year 1914. 362 pp. By John McLeish,
 1916.

NOTE.—*The following parts were separately printed and issued in advance of the Annual Report for 1914.*

348. Coal and coke.
 349. Iron and steel.
 350. Copper, gold, lead, nickel, silver, zinc, and other metals.
 383a. Cement, lime, clay products, stone, and other structural materials.
- (E) 385. Investigation of a reported discovery of phosphate at Banff,
 (F) 386. Alberta. (Bulletin No. 12.) 38 pp., 12 pls., 1 fig., 1 map
 —No. 387. By H. S. de Schmid.
388. The building and ornamental stones of Canada: Vol. IV,
 Manitoba, Saskatchewan, and Alberta. 333 pp., 56 pls.,
 6 figs., 1 map (not marked). By W. A. Parks, 1917.
- (E) 396. Phosphate in Canada. 156 pp., 32 pls., 12 figs., 2 maps—
 (F) 397. Nos. 398, 399—11 maps not marked. By H. S. Spence.
 1921 (marked 1920).
- (E) 401. Feldspar in Canada. 125 pp., 22 pls., 12 figs., 2 maps—
 (F) *402. Nos. 403 and 404. By H. S. deSchmid, 1916.
406. Description of the laboratories of the Mines Branch of the
 Department of Mines. (Bulletin No. 13.) 51 pp.,
 60 pls., 12 figs., 1916.
408. Preliminary report on the mineral production of Canada, 1915.
 By John McLeish, 1916.
- (E) 411. Researches on cobalt and cobalt alloys, conducted at Queen's
 (F) *412. University, Kingston, Ontario, for the Mines Branch of
 the Department of Mines.
 Part IV—Cobalt alloys with non-corrosive properties.
 37 pp., 31 pls., 50 figs. By H. T. Kalmus and K. B.
 Blake, 1916.
- (E) 413. Researches on cobalt and cobalt alloys, conducted at Queen's
 (F) 414. University, Kingston, Ontario, for the Mines Branch of
 the Department of Mines.
 Part V—Magnetic properties of cobalt and of Fe_2Co .
 18 pp., 1 pl., 13 figs. By H. T. Kalmus and K. B.
 Blake, 1916.
- (E) 421. Summary report of the Mines Branch for the calendar year
 (F) *422. ending December 31, 1915. 213 pp., 13 pls., 3 figs.,
 1916.
 Director's general report. By Eugene Haanel.
 Possibility of producing refined copper in Canada. By
 A. W. G. Wilson.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- Mining antimony ores in Canada. By A. W. G. Wilson.
 Investigation of iron ores. By A. H. A. Robinson.
 Limestones of the province of Quebec. By Howells
 Fréchette.
 Investigation of miscellaneous non-metallic minerals.
 By H. S. de Schmid.
 Building and ornamental stones of Saskatchewan and
 Alberta. By W. A. Parks.
 Progress report for 1915 of Ore Dressing and Metallurgical
 Division. By G. C. Mackenzie.
 List of ores tested. By G. C. Mackenzie.
 Descriptions of several properties and tests made. (Molyb-
 denite and iron ores.) By G. C. Mackenzie, W. B.
 Timm, and C. S. Parsons.
 Work at Fuel Testing Station, 1915. By B. F. Haanel.
 Work of chemical laboratories of Fuel Testing Station,
 1915. By E. Stansfield.
 Investigation of peat bogs, 1915. By A. Anrep.
 The clays of southern Saskatchewan. By N. B. Davis.
 Work done by the chemical laboratory, Division of
 Chemistry, 1915. By F. G. Wait.
 Report on Mineral Resources and Statistics, 1915.
 Description of Ceramics Laboratory and equipment.
 By J. Keele.
 Testing of clays and shales. By J. Keele.
 Notes on the industrial values of the clay and shale de-
 posits in the Moncton map area, New Brunswick.
 By J. Keele.
 Work of Explosives Division, 1915. By J. G. S. Hudson.
 Explosion at the Reserve mine, Western Fuel Company,
 Nanaimo, B.C. By J. G. S. Hudson.
 Appendix. Preliminary report on the mineral production,
 1915. By John McLeish.

- (E) 426. Annual report on the mineral production of Canada during
 (F) *427. the calendar year 1915. 364 pp. By John McLeish, 1917.

NOTE.—*The following parts were separately printed and issued in advance of
 the Annual Report for 1915.*

419. Iron and steel.
 420. Coal and coke.
 423. Cement, lime, clay products, stone, and other structural
 materials.
 424. A general summary of the mineral production.
 425. Copper, gold, lead, nickel, silver, zinc, and other metals.
 428. The production of spelter in Canada. 60 pp. By A. W. G.
 Wilson, 1916.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

430. The coal-fields and coal industry of eastern Canada; a general survey and description. (Bulletin No. 14.) 62 pp., 26 pls., 1 fig., 1 map—No. 434. By Francis W. Gray, 1917.
432. The mining of thin-coal seams as applied to the eastern coal-fields of Canada. (Bulletin No. 15.) 132 pp., 1 pl., 61 figs., 1 map—No. 434. By J. F. Kellock Brown, 1917.
435. Mineral springs of Canada. Part I: The radioactivity of some Canadian mineral springs. (Bulletin No. 16.) 60 pp., 23 pls., 5 figs., 1 map—No. 437. By J. Satterly and R. T. Elworthy, 1917. Appendices: I—Bibliography of the radioactivity of springs; II—Table of equivalent Centigrade and Fahrenheit temperatures.
447. The value of peat fuel for the generation of steam. (Bulletin No. 17.) 42 pp., 1 pl., 5 figs., 6 charts. By John Blizzard, 1917.
- *449. Preliminary report on the mineral production of Canada. By John McLeish, 1916.
452. Report on the building and ornamental stones of Canada: Vol. V, British Columbia. 236 pp., 47 pls., 3 figs. By W. A. Parks, 1917. Appendices: I—6 tables; II—Production of stone in British Columbia in 1913, 1914, and 1915; III—Production of stone by classes in British Columbia in 1913, 1914, and 1915; IV—Production of stone in Canada by provinces in 1915; V—Reference list by numbers to the stones described in this report.
- (E) 454. Summary report of the Mines Branch for the calendar year 1916. 183 pp., 14 pls., 10 drawings, 1917.
- (F) 455. Director's general report. By Eugene Haanel.
Investigation of iron ores. By A. H. A. Robinson.
Separation of lime from Grenville magnesite: and other work of Non-metalliferous Division, 1916. By Howells Fréchette.
A reconnaissance for phosphate in the Rocky mountains; and for graphite near Cranbrook, B.C. By H. S. de Schmid.
Investigation of the sands and sandstones of Canada. By L. H. Cole.
The occurrence and testing of foundry moulding sands. By L. H. Cole.
Investigation of bituminous sands of northern Alberta. By S. C. Ells.
Building and ornamental stones of British Columbia. By W. A. Parks.
Work at the Fuel Testing Station, 1916. By B. F. Haanel.
Work of chemical laboratories of Fuel Testing Station, 1916. By E. Stansfield.
Specifications for the purchase of oil. By E. Stansfield and Victor F. Murray.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively

- The Hoffmann potash test. By J. H. H. Nicolls.
 Notes on the errors caused by the erosion of an iron ball mill. By R. C. Cantelo.
 Oil-burette for fractional distillation and specific gravity determination. By Victor F. Murray.
 Automatic regulator for electric water-still. By Victor F. Murray.
 Nitrogen distillation apparatus. By Victor F. Murray.
 Investigation of peat bogs, 1916. By A. Anrep.
 Report of mechanical work done at Fuel Testing Station, 1916. By A. W. Mantle.
 Progress report of Ore Dressing and Metallurgical Division. By G. C. Mackenzie.
 Report on the chemical laboratory of Ore Dressing Division. By H. C. Mabee.
 Field investigation of clay and shale resources. By J. Keele.
 Apatite: a substitute for bone ash in the manufacture of bone china. By J. Keele.
 Refractory materials in Canada. By J. Keele.
 Tests on clays and shales from Pembina mountains in southern Manitoba. By J. Keele.
 Clay investigation in southern Saskatchewan. By N. B. Davis.
 Work of chemical laboratory of the Division of Chemistry, 1916. By F. G. Wait.
 Report of mineral resources and statistics, 1916. By John McLeish.
 Field work of Division of Mineral Resources and Statistics, 1916. By A. Buisson.
 Appendix. Preliminary report on the mineral production of Canada, 1916. By John McLeish.
466. Test of some Canadian sandstones to determine their suitability as pulpstones. (Bulletin No. 19.) 16 pp., 6 pls., 4 figs. By L. H. Cole, 1917.
468. Report on the clay resources of southern Saskatchewan. 93 pp., 21 pls., 1 fig., 2 maps—Nos. 468a and 469. By N. B. Davis, 1918.
- *472. Mineral springs of Canada, Part II: The chemical character of some Canadian mineral springs. (Bulletin No. 20.) 173 pp., 10 pls., 2 figs. By R. T. Elworthy, 1918.
- (E) 474. Annual report on the mineral production of Canada during
 (F) 475. the calendar year 1916. 343 pp. By John McLeish, 1918.
- NOTE.—*The following parts were separately printed and issued in advance of the Annual Report for 1916.*
458. Iron and steel.
 465. Coal and coke.
 470. Cement, lime, clay products, stone, and other structural materials.
 471. Copper, gold, lead, nickel, silver, zinc, and other metals.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- *476. Occurrence and testing of foundry moulding sands. (Being reprint of a report appearing in the annual summary report of the Mines Branch for the year ending December 31, 1916.) (Bulletin No. 21.) 17 pp., 3 pls., 2 figs. By L. H. Cole, 1917.
- *478. Preliminary report on the mineral production of Canada, 1917. By John McLeish.
- *479. Analyses of Canadian fuels, Part I: Maritime Provinces. (Bulletin No. 22.) 28 pp. Compiled by E. Stansfield and J. H. H. Nicolls, 1918.
- 480. Analyses of Canadian fuels, Part II: Quebec and Ontario. (Bulletin No. 23.) 25 pp. Compiled by E. Stansfield and J. H. H. Nicolls, 1918.
- *481. Analyses of Canadian fuels, Part III: Manitoba and Saskatchewan. (Bulletin No. 24.) 15 pp. Compiled by E. Stansfield and J. H. H. Nicolls. 1918.
- 482. Analyses of Canadian fuels, Part IV: Alberta and Northwest Territories. (Bulletin No. 25.) 77 pp. Compiled by E. Stansfield and J. H. H. Nicolls. Appendices: A—Distillation tests of crude petroleum and its products; B—Classification of the products of oil distillation. First edition, 1918. Second edition, 1921.
- 483. Analyses of Canadian fuels, Part V: British Columbia and Yukon Territory. (Bulletin No. 26.) 24 pp. Compiled by E. Stansfield and J. H. H. Nicolls, 1918.
- (E) 493. Summary report of the Mines Branch of the Department of
- (F) 494. Mines for the calendar year ending December 31, 1917. 153 pp., 4 figs. 1918.
- Director's general report. By Eugene Haanel.
- Investigation of iron ores. By A. H. A. Robinson.
- Limestones of Ontario. By Howells Fréchette.
- The Canadian graphite industry. By H. S. Spence.
- Investigation of certain sand and sandstone deposits. By L. H. Cole.
- Work at the Fuel Testing Station, 1917. By B. F. Haanel.
- Work of chemical laboratories of the Fuel Testing Station, 1917. By E. Stansfield.
- Investigation of peat bogs. By A. Anrep.
- Report of progress of Ore Dressing and Metallurgical Division, 1917. By G. C. Mackenzie.
- List of ores tested and reports thereon, 1917. By W. B. Timm and C. S. Parsons.
- Report of chemical laboratory of Ore Dressing and Metallurgical Division. By H. C. Mabee.
- Investigation of clay and shale resources. By J. Keele.
- Pottery clays. By J. Keele.
- Magnesite. By J. Keele.
- Silica. By J. Keele.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

Tests of samples of bedrock. By K. A. Clark.
 Comparison of the Road Materials Laboratories with
 other laboratories. By K. A. Clark.
 Investigational work on the sampling and testing of bed-
 rock. By K. A. Clark.
 Sampling and testing of fieldstone. By K. A. Clark.
 Special series of tests on bedrock collected from the quarries
 in the city of Montreal. By K. A. Clark.
 Work of Division of Chemistry. By F. G. Wait.
 Report of Division of Mineral Resources and Statistics,
 1917. By John McLeish.

496. Results of forty-one steaming tests conducted at the Fuel
 Testing Station, Ottawa. (Bulletin No. 27.) 83 pp.,
 11 figs., 41 charts. By John Blizard and E. S. Malloch,
 1920.
502. The economic use of coal for steam-raising and house-heating.
 (Bulletin No. 28.) 21 pp. By J. Blizard, 1919.
- (E) *504. Annual report on the mineral production of Canada during the
 (F) *505. calendar year 1917. 258 pp. By John McLeish, 1919.

NOTE.—*The following parts were separately printed and issued in advance of
 the Annual Report for 1917.*

497. Copper, gold, lead, nickel, silver, zinc, and other metals.
 498. Iron and steel.
 499. General summary of the mineral production.
 500. Cement, lime, clay products, stone, and other structural
 materials.
 501. Coal and coke.
- *506. Preliminary report on the mineral production of Canada, 1918.
 By John McLeish.
- *507. Potash recovery at cement plants. (Bulletin No. 29.) 34 pp.,
 10 pls., 4 tables. By A. W. G. Wilson, 1919.
- (E) *509. Summary report of the Mines Branch of the Department of
 (F) *510. Mines for the calendar year ending December 31, 1918.
 225 pp., 6 figs., 9 diagrams, 1920.
 Director's general report. By Eugene Haanel.
 Investigation of pyrites resources. By A. H. A. Robinson.
 Limestones of Ontario and Quebec. By Howells Fréchette.
 Investigation of graphite and the graphite industry;
 mica for condenser plates. By H. S. Spence.
 Preliminary report on the silica deposits of eastern Canada.
 By L. H. Cole.
 Preliminary notes on the moulding sand deposits of eastern
 Canada. By L. H. Cole.
 Building stones of Wolfe River district east of Port Arthur
 By L. H. Cole.
 Notes on a discovery of rock salt at Malagash, Nova
 Scotia. By L. H. Cole.
 Work at the Fuel Testing Station, 1918. By B. F.
 Haanel.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions
 respectively.

- Report on test of New Brunswick oil shales in the Wallace retort. By B. F. Haanel.
- Work of chemical laboratories of Fuel Testing Station, 1918. By E. Stansfield.
- Lignite carbonization. By E. Stansfield and R. E. Gilmore.
- Mechanical work at Fuel Testing Station. By A. W. Mantle.
- Progress report of Ore Dressing and Metallurgical Division. By G. C. Mackenzie.
- List of ores tested and reports thereon. By W. B. Timm and C. S. Parsons.
- Report of work of chemical laboratory of Ore Dressing and Metallurgical Division. By H. C. Mabee.
- Report of Ceramics Division: investigation of clay and shale resources of British Columbia, and of eastern and northern Ontario. By J. Keele.
- Report of Road Materials Division: tests on bedrock, gravel, soil samples, and weathered rock. By K. A. Clark.
- Alberta bituminous sands for rural roads. By G. C. Parker.
- Work of Division of Chemistry, 1918. By F. G. Wait.
- Report of Division of Mineral Resources and Statistics, 1918. By John McLeish.
- (E) 511. Graphite. 202 pp., 56 pls., 43 figs., 6 maps—Nos. 513, 514,
(F) *512. 515, 516, 517, and 518. By H. S. Spence. Appendix: Bibliography of Canadian graphite, 1920.
519. Smelter treatment rates. Report of the Committee of Investigation in the matter of tolls charged by the Consolidated Mining & Smelting Company of Canada, Limited, at Trail, British Columbia, June, 1919. (Bulletin No. 30.) 45 pp., 8 figs. Appendix: Schedule "C": lead ores, Consolidated Mining & Smelting Company of Canada, Ltd., June 24, 1919. 1919.
- (E) 520. Annual report on the mineral production of Canada during
(F) 521. the calendar year 1918. 80 pp. By John McLeish, 1919.
522. Report on some sources of helium in the British Empire. (Bulletin No. 31.) 72 pp., 1 pl., 20 figs., 4 maps—Nos. 523, 524, 525, and 526. By J. C. McLennan and associates. Appendix: Gas density balance, 1920.
527. The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1918. 74 pp. By John McLeish, 1919.
- *528. The production of coal and coke in Canada during the calendar year 1918. 40 pp. By John McLeish, 1919.
529. The production of iron and steel in Canada during the calendar year 1918. 36 pp. By John McLeish, 1920.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

530. Report on road materials along the St. Lawrence river from the Quebec boundary line to Cardinal, Ontario. (Bulletin No. 32.) 65 pp., 6 pls., 1 map—No. 532. By R.H.Picher. Appendices: I—Rock outcrops; II—Character of boulder deposits or field stone; III—Character of gravel deposits; IV—Commercial development of gravel deposits, 1920.
533. Preliminary report on the mineral production of Canada during the calendar year 1919. By John McLeish, 1920.
- (E) 542. Summary report of the Mines Branch of the Department of
(F) 543. Mines for the calendar year ending December 31, 1919. 182 pp., 2 figs., 5 diagrams, 1920.
Director's general report. By Eugene Haanel.
Progress report of Metalliferous Mines Division. By A. W. G. Wilson.
Investigation of iron ore deposits in northern Ontario. By A. H. A. Robinson.
Iron oxide pigments in the province of Quebec. By Howells Fréchette.
Investigation of miscellaneous non-metallic minerals. By H. S. Spence.
Work at the Fuel Testing Station, 1919. By B. F. Haanel.
Work of chemical laboratories of the Fuel Testing Station, 1919. By E. Stansfield.
Lignite carbonization. By E. Stansfield and R. E. Gilmore.
Report of peat committee for year ending December 31, 1919. By B. F. Haanel.
Progress report of Ore Dressing and Metallurgical Division. By W. B. Timm.
List of ores tested, and detailed particulars of concentration and separation tests. By W. B. Timm and R. K. Carnochan.
Report of chemical laboratory of Ore Dressing and Metallurgical Division. By H. C. Mabee.
Report of Ceramics Division: detailed reports on residual clays in British Columbia.
Clays and shales in vicinity of Fort William and Port Arthur.
Kaolin in Gatineau valley. By J. Keele.
Aluminium and its sources. By R. T. Elworthy.
Structural materials in Dundas, Stormont, and Glengarry counties, eastern Ontario. By J. Keele and L. H. Cole.
Pottery clays. By M. E. Young.
Road materials and soil conditions in the area between Winnipeg and Brandon, Manitoba. By K. A. Clark.
Road materials in Rocky Mountains Park, Alberta. By K. A. Clark.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- Road materials investigation on Chateauguay and Beauharnois counties, Quebec, from Morrisburg, Ontario, along the St. Lawrence river to the Quebec boundary, and in the neighbourhood of Renfrew, Ont. By H. Gauthier.
544. The production of iron and steel in Canada during the calendar year 1919. 45 pp. By John McLeish, 1920.
- (E) *545. Annual report on the mineral production of Canada during
- (F) *546. the calendar year 1919. 82 pp. By John McLeish, 1920.
547. The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1919. 76 pp. By John McLeish, 1921.
- *548. The production of coal and coke in Canada during the calendar year 1919. 39 pp. By John McLeish, 1921.
- (E) 549. Report on structural materials along the St. Lawrence river
- (F) 550. between Prescott, Ontario, and Lachine, Quebec. 119 pp., 30 photographs, 5 figs., 3 maps—Nos. 551, 552, and 553 inclusive. By J. Keele and L. H. Cole. Appendices: A—Pleistocene and recent fossils of the St. Lawrence valley, from Prescott to Beauharnois. By E. J. Whitaker. B—Ordovician fossils from St. Lawrence canal system localities, Ontario and Quebec. Collected by L. H. Cole and J. Keele; identified by Alice E. Wilson, 1922.
554. Preliminary report on the mineral production of Canada during the calendar year 1920, By John McLeish.
555. Silica in Canada: its occurrence, exploitation, and uses. Part I—Eastern Canada. 126 pp., 15 pls., 16 figs., 7 maps—Nos. 557, 558, 559, 560, 561, 562, and 563. By L. Heber Cole. (See No. 686.) 1923.
564. The preparation, transportation, and combustion of powdered coal. 131 pp., 3 pls., 39 figs. By J. Blizard. Appendix: Boiler tests with pulverized coal. By Henry Kreisinger, Milwaukee, Wis., and J. Blizard, Pittsburgh, Pa., 1921.
565. Gas producer trials with Alberta coals. (Supplementing No. 331.) (Bulletin No. 33.)¹ 40 pp., 1 fig., 18 charts. By J. Blizard and E. S. Malloch, 1921.
566. The production of copper, gold, nickel, silver, zinc, and other metals during the calendar year 1920. 76 pp. By John McLeish.
567. The production of coal and coke in Canada during the calendar year 1920. 36 pp. By John McLeish.
- (E) *568. Annual report on the mineral production of Canada during the
- (F) 569. calendar year 1920. 80 pp. By John McLeish.

Publications marked thus () are out of print.

¹ No further Mines Branch reports were numbered as bulletins.

² Since 1920, reports on the mineral production in Canada have been published by the Mining, Metallurgical and Chemical Branch, Dominion Bureau of Statistics, and applications for these reports should be addressed to the Dominion Statistician, Ottawa, Ont.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

570. Barium and strontium in Canada. 100 pp., 15 pls., 18 figs.
By H. S. Spence, 1922.
- (E) 574. Summary report of investigations made by the Mines Branch
(F) 573. during the calendar year ending December 31, 1920.
87 pp., 7 figs., 1922.
Development of chemical and metallurgical industries
in Canada. By A. W. G. Wilson.
Mineral pigments in eastern Canada. By Howells
Fréchette.
Investigation of miscellaneous non-metallic minerals.
By H. S. Spence.
Alkali deposits of western Canada. By L. H. Cole.
Bituminous sands of Alberta. By S. C. Ells.
Report of Ore Dressing and Metallurgical Division:
ores tested, and reports thereon. By W. B. Timm
and R. K. Carnochan.
Carbonization of peat. By E. Stansfield and J. H.
H. Nicolls.
Notes on the Hoffmann potash test. By J. H. H. Nicolls.
Trent process for purifying coal high in ash. By B. F.
Haanel.
Report of Ceramics Division: Testing of brick and fire-
clays from the various provinces; pottery clays;
clay working industry; field examination and clay
testing; practical instructions as to sampling; labor-
atory tests; testing under working conditions. By
J. Keele.
Road material survey along Gananoque-Napanee section
of the Toronto-Montreal highway, Ontario. By
H. Gauthier.
Road materials in Nova Scotia. By H. Gauthier.
Appendix: Preliminary report on the investigation of
the manufacture of peat fuel, conducted by the
Joint Peat Committee of the Federal Government and
the Government of Ontario: up to December 30,
1920; together with a statement of the plans, and
outline of the work to be done, during the year 1921.
By B. F. Haanel.

**NOTE.—The following parts of this report were separately printed and were issued concurrently.*

575. Investigations in 1920: Mineral Resources and Tech-
nology. (pp. 5-22.)
576. Investigations in 1920: Ore Dressing and Metallurgy.
(pp. 23-38.)
577. Investigations in 1920: Fuels and Fuel Testing. (pp.
39-54) (pp. 76-81—contains appendix.)
578. Investigations in 1920. Ceramics and Road Materials.
(pp. 55-75.)

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- *579. Titanium. 127 pp., 5 figs., 2 maps—Nos. 581 and 582.
By A. H. A. Robinson, 1922.
583. Talc and soapstone in Canada. 85 pp., 2 pls., 15 figs., 1 map—
No. 585. By H. S. Spence, 1922.
586. Summary report of investigations made by the Mines Branch
during the calendar year ending December 31, 1921.
346 pp., 20 pls., 15 figs., 21 diagrams, 1922.
Amber from Coalmont, B.C. By A. W. G. Wilson.
The iron industry of British Columbia and Ontario. By
A. H. A. Robinson.
Iron oxide pigments in Ontario. By Howells Fréchette.
Investigation of miscellaneous non-metallic minerals.
By H. S. Spence.
Alkali deposits of western Canada. By L. H. Cole and
F. M. MacNiven.
Cretaceous shales of Manitoba and Saskatchewan as a
possible source of crude petroleum. By S. C. Ells.
Oil shales of Canada. By S. C. Ells.
Chemical products from natural gas. By R. T. Elworthy.
The possibility of producing methanol (methyl alcohol)
and formaldehyde from natural gas. By R. T.
Elworthy.
The chemical and physical characters of bentonite. By
E. A. Thompson and A. Sadler.
Report of Ore Dressing and Metallurgical Division, 1921.
By W. B. Timm and other members of the staff.
Lignite carbonization. By J. H. H. Nicolls and Harold
Kohl.
Notes on the burning quality of kerosene oils for illuminat-
ing purposes. By P. V. Rosewarne.
The lubricating value of cod liver oil. By P. V. Rose-
warne.
Preliminary report on the investigation of oil shales. By
A. A. Swinnerton.
Outline of work done by Ceramics Division; tests of clay
from various provinces; pottery clays; kiln scum
on face bricks; working stony clays for brick and tile.
Tentative method for sampling clay deposits; clay-working
industry; ball clay in Saskatchewan. By J. Keele.
Laboratory tests on road building stone; report on the
investigation of a number of rock quarries and gravel
deposits in Prescott and Russell counties, Ontario;
road materials survey in Rocky Mountains Park;
experimental abrasion test on concrete; results of
physical tests upon samples of stone and gravel from
Nova Scotia. By H. Gauthier.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

Appendix: Preliminary report on the investigation of peat fuel conducted by the Joint Peat Committee for the Federal Government and the Government of the Province of Ontario, January 1, 1921 to March 31, 1922, together with a statement of plans of the work to be done during the year 1922. By B. F. Haanel.

**NOTE.—The following parts of this report were separately printed and were issued concurrently.*

- 588. Investigations in 1921: Mineral resources and technology. (pp. 7-77.)
- 589. Investigations in 1921: Ore Dressing and Metallurgy. (pp. 78-204.)
- 590. Investigations in 1921: Fuels and Fuel Testing. (pp. 205-252, 319-338.)
- 591. Investigations in 1921: Ceramics and Road Materials. (pp. 253-318.)
- 592. Molybdenum: metallurgy and uses; and the occurrence, mining, and concentration of its ores. 292 pp., 11 pls., 55 figs., 41 tables, 3 maps—Nos. 594, 595, and 596. By V. L. Eardley-Wilmot, 1925.
- 597. Development of chemical, metallurgical, and allied industries in Canada in relation to the mineral industry. 329 pp., 39 tables, 12 diagrams. By A. W. G. Wilson, 1924.

NOTE.—This report was also published in two volumes as follows:

- 598. Vol. I—Chemical industries.
 - 599. Vol. II—Metallurgical and allied industries.
- Separate copies of the following diagrams and charts accompanying report No. 597 (and the separate volumes—Nos. 598 and 599) are available for distribution:
- Alkali industry—products, by-products, and industrial uses.
 - Electro-products and some of their uses.
 - Utilization of atmospheric nitrogen—Cyanamide process.
 - Chart showing some of the industrial applications of lime.
 - Chart showing some of the many uses of alcohol.
 - Chart of the hardwood distillation industry.
 - Products derived from coal.
 - Iron industry.
 - Industrial uses of lead.
- 605. Summary report on Mines Branch investigations during the calendar year ending December 31, 1922. 273 pp., 5 pls., 17 figs., 11 diagrams, 1924.
- Mineral pigments (eastern Canada). By Howells Fréchette.
 - Alkali deposits, western Canada; volcanic ash near Waldeck, Saskatchewan. By L. H. Cole.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

Canadian feldspar in 1922; fluorspar in 1922; graphite in Canada, 1922; talc and soapstone in Canada, 1922; the molybdenum situation in Canada, 1922. By V. L. Eardley-Wilmot.

Bituminous sands of northern Alberta. By S. C. Ells.

Some Canadian fossil resins. By R. T. Elworthy.

A field method and apparatus for the determination by means of electrical conductivity measurements, of the character of waters leaking into oil and gas wells. By R. T. Elworthy.

Report of the Ore Dressing and Metallurgical Division, 1922. By W. B. Timm and other members of staff.

Carbonization of peat in commercial hardwood distillation ovens. By R. E. Gilmore and Harold Kohl.

Report on treatment of oil shale from New Brunswick by the Ryan oil digestion process. By A. A. Swinnerton.

Preliminary gasoline survey: analyses of gasoline samples collected in Ottawa, December, 1922. By P. V. Rosewarne.

Ceramic materials. By Howells Fréchette.

Report on investigation of road materials along the Hawk Creek-McLeod Meadows section of the Banff-Windermere highway, Rocky Mountains Park. By H. Gauthier.

Prospecting for road materials between Massive and Johnson canyon. By H. Gauthier.

Experiments for investigating the test for the crushing strength of rock. By H. Gauthier.

Road materials in Nova Scotia. By R. H. Picher.

Appendix. Interim report of the Joint Peat Committee. By B. F. Haanel.

NOTE.—The following parts of this report were separately printed and were issued concurrently.

607. Investigations in 1922: Mineral Resources and Technology. (pp. 7-70.)

608. Investigations in 1922: Ore Dressing and Metallurgy. (pp. 71-193.)

609. Investigations in 1922: Fuels and Fuel Testing. (pp. 194-225, 262-266.)

610. Investigations in 1922: Ceramics and Road Materials. (pp. 226-261.)

(E) ***611.** The mineral industries of Canada. (British Empire Exhibition Edition.) 138 pp., 35 pls., 1 map—No. 613. Compiled by A. H. A. Robinson with the co-operation of the staff of the Mines Branch. First printing 1924. Second printing 1925.

(F) ***612.**

(E) **614.** Facts about peat. 48 pp. By B. F. Haanel, 1924.

(F) **615.**

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- 616.¹** Investigations of mineral resources and the mining industry, 1923. 74 pp, 1924.
 Bentonite. By H. S. Spence.
 Feldspar. By H. S. Spence.
 Bituminous sands of northern Alberta. By S. C. Ells.
 Natural abrasive materials in Canada. By V. L. Eardley-Wilmot.
 Natural gas in Alberta. By R. T. Elworthy.
 Sodium and magnesium salts of western Canada. By L. H. Cole.
 Zinc-lead mining in British Columbia. By A. H. A. Robinson.
 Canadian exposition train in France and Belgium, 1923. By A. Buisson.
- 616a.** Natural gas in Alberta. (Advance section of No. 616—Investigations of mineral resources and the mining industry, 1923). 31 pp. By R. T. Elworthy.
- 617.** Investigations in ore dressing and metallurgy, 1923. 150 pp., 3 pls., 11 figs. By W. B. Timm and associates, 1925.
- 618.** Investigations of fuels and fuel testing, 1923. 86 pp., 2 pls., 5 figs., 7 diagrams, 1924.
 The carbonization of lignite and sub-bituminous coals. By Harold Kohl.
 Survey of Maritime Provinces coals. By J. H. H. Nicolls.
 A study of the nature of sulphur in coal and coke from the Maritime Provinces. By J. H. H. Nicolls.
 Gasoline survey for 1923. By P. V. Rosewarne.
 The Hartman oil shale retort. By A. A. Swinnerton.
 Report on the Ramage process for oil refining. By R. E. Gilmore and P. V. Rosewarne.
- 619.** Investigations in ceramics and road materials, 1923. 75 pp., 1 pl., 1925.
 Investigation of ceramic industry; exhibit for the British Empire Exhibition; laboratory investigations. By Howells Fréchette.
 Tunnel kilns. By L. P. Collin.
 Road materials in Ontario and Quebec, with particular reference to their relative merits, based on a study of their use. By H. Gauthier.
 Road materials in Nova Scotia and New Brunswick. By R. H. Picher.
- *624.** Catalogue of Mines Branch publications. (12th-14th editions.)
- 625.** Bituminous sands of northern Alberta. 35 pp., 6 pls. By Sidney C. Ells. (See Nos. 632 and 684.) 1924.
- *626.** Bentonite. 36 pp., 14 pls., 2 figs. By H. S. Spence. 1924.

Publications marked thus () are out of print.

¹ Since 1923 the Summary Reports of the Mines Branch have been issued in four parts as separate reports of the various divisions.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- *627. The mining laws of Canada—a digest of Dominion and Provincial laws. (British Empire Exhibition edition.) 43 pp., 1924.
- (E) 628. Central and district heating: the possibilities of applications
(F) 629. in Canada. 79 pp., 26 figs., 4 tables. By F. A. Combe. (Dominion Fuel Board Report No. 3.) 1924.
- (E) 630. Coke as a household fuel in central Canada. 140 pp., 51 pls.,
(F) 631. 18 figs., 24 tables. By J. L. Landt. (Dominion Fuel Board Report No. 5.) 1925.
632. Bituminous sands of northern Alberta: occurrence and economical possibilities. Report on investigations to the end of 1924. 244 pp., 43 pls., 47 figs., 6 tables, 8 maps—Nos. 633, 634, 635, 636, 637, 638, 639, and 640. Four map sections. By S. C. Ells, 1926.
641. Final report of the Peat Committee appointed by the Governments of the Dominion of Canada and the Province of Ontario. Peat: its manufacture and uses. Published jointly by the Mines Branch, Department of Mines, Canada, and the Department of Mines, Ontario. 298 pp., 58 pls., 46 figs., 28 tables. By B. F. Haanel. Appendices: A—Investigation of drying conditions obtaining during the manufacture of peat fuel at the Alfred peat bog, by H. A. Leverin; B—Preliminary report on the relations of the maceration to the drying qualities of peat, by R. E. Gilmore; C—Manufacture of carbonized peat at Dumfries, Scotland, report by J. O. Roos of Hjelmsäter, 1926.
- (E) 642. Investigations of mineral resources and the mining industry
(F) 685. 1924. 118 pp., 5 pls., 7 figs., 1926.
- A review of fifteen years' progress in the production of non-metallic minerals in Canada. By members of the staff of the Mineral Resources Division.
- Titaniferous magnetite deposits of Bourget township, Chicoutimi district, Quebec. By A. H. A. Robinson.
- The goldfields of western Quebec. By W. B. Timm and A. H. A. Robinson.
- Magnesium sulphate in British Columbia. By M. F. Goudge.
- Sodium carbonate in British Columbia. By M. F. Goudge.
- Natural gas and petroleum in northern Alberta. By R. T. Elworthy.
643. Investigations in ore dressing and metallurgy, 1924. 115 pp., 6 figs., 7 tables. By W. B. Timm and associates, 1926.
644. Investigations of fuels and fuel testing, 1924. 81 pp., 4 pls., 5 figs., 1926.
- Coking experiments on coals from the Maritime Provinces. By B. F. Haanel and R. E. Gilmore.
- Friability tests on various fuels sold in Canada. By J. H. H. Nicolls.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- The effects of exposing Canadian lignite to atmospheres of different humidities. By J. H. H. Nicolls.
- The examination of some lubricating oils sold in Canada. By P. V. Rosewarne.
- Gasoline survey for 1924. By P. V. Rosewarne and J. McD. Chantler.
- Report of carbonization and washing experiments on sub-bituminous coal from Coal Valley, Alberta. By R. A. Strong.
- Distillation of oil shale—comparison of laboratory methods. By A. A. Swinnerton.
645. Investigations in ceramics and road materials, 1924. 45 pp., 1925.
 Ceramic industry. By Howells Fréchette.
 Laboratory investigations. By Howells Fréchette.
 Cost of burning brick and tile. By L. P. Collin.
 Road materials: New Brunswick and Nova Scotia. By R. H. Picher.
646. Sodium sulphate of western Canada; occurrence, uses, and technology. 160 pp., 15 pls., 16 figs., 10 tables, 22 maps—Nos. 647 to 668 inclusive. By L. H. Cole, 1926.
669. Investigations of mineral resources and the mining industry, 1925. 84 pp., 1926.
 Hot springs in western Canada—their radioactive and chemical properties. By R. T. Elworthy.
 Natural gas in New Brunswick. By R. T. Elworthy.
 The building and ornamental stone trade in Great Britain. By W. A. Parks.
 Notes on zinc and lead in eastern Canada. By A. H. A. Robinson.
 Lithium-bearing minerals in Canada. By L. H. Cole and V. L. Eardley-Wilmot.
 The present status of the abrasive industry. By V. L. Eardley-Wilmot.
670. Investigations in ore dressing and metallurgy, 1925. 123 pp., 4 pls., 9 figs. By W. B. Timm and associates, 1926.
671. Investigations of fuels and fuel testing, 1925. 184 pp., 58 tables, 7 pls., 17 figs., 1927.
 Examination of typical cokes sold in Canada as household fuels. By R. E. Gilmore, C. B. Mohr, and others. Published separately as No. 671-1.
 Tests of various fuels made in a domestic hot-water boiler at the Fuel Testing Station in co-operation with the Dominion Fuel Board. By E. S. Malloch and C. E. Baltzer. Published separately as No. 671-2.
 Low-temperature carbonization of bituminous coals. By R. A. Strong. Published separately as No. 671-3.
 Effects of continued weathering upon the friabilities of various fuels. By J. H. H. Nicolls.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- Analyses of solid fuels. By J. H. H. Nicolls. Published separately as No. 671-4.
- The examination of lubricating oils after use in automobile engines. By P. V. Rosewarne.
- Gasoline survey for 1925. By P. V. Rosewarne and H. McD. Chantler.
- Analyses of oils and liquid fuels. By P. V. Rosewarne.
- Distillation of oil shale with circulation of uncondensed gases. By A. A. Swinnerton.
672. Investigations in ceramics and road materials, 1925. 35 pp., 2 tables, 1926.
- Clay-working plants in Quebec, Nova Scotia, and New Brunswick. By L. P. Collin.
- Andalusite in Nova Scotia. By L. P. Collin.
- Causes and prevention of scumming and efflorescence. By L. P. Collin.
- Texture of ceramic materials. By J. F. McMahon.
- Road materials: eastern Ontario. By R. H. Picher.
- Gravel and gravel roads. By R. H. Picher.
- (E) 673. Abrasives: Products of Canada, technology and application.
- (F) 674. Part I, Siliceous abrasives; sandstones, quartz, tripoli, pumice, and volcanic dust. 119 pp., 14 pls., 8 figs., 16 tables. By V. L. Eardley-Wilmot, 1927.
- (E) 675. Abrasives: Products of Canada, technology and application.
- (F) 676. Part II, Corundum and diamond. 51 pp., 5 pls., 6 figs., 4 tables. By V. L. Eardley-Wilmot, 1927.
- (E) 677. Abrasives: Products of Canada, technology and application.
- (F) 678. Part III, Garnet. 69 pp., 4 pls., 19 figs., 6 tables. By V. L. Eardley-Wilmot, 1927.
679. Helium in Canada. 63 pp., 2 pls., 2 maps—Nos. 680 and 681. By R. T. Elworthy, 1926.
- (E) 682. Preliminary report on the limestones of Quebec and Ontario.
- (F) 683. 75 pp., 16 pls., 3 figs. By M. F. Goudge, 1927.
684. Use of Alberta bituminous sands for surfacing of highways. 37 pp., 4 pls., 10 figs. By S. C. Ells, 1927.
686. Silica in Canada; its occurrence, exploitation, and uses. Part II—Western Canada. 59 pp., 6 pls., 7 figs. By L. H. Cole. Appendix I—Recent developments in the silica industry in eastern Canada. (*See also* Rept. No. 555). 1928.
687. Investigations of mineral resources and the mining industry, 1926. 80 pp., 7 pls., 5 figs., 1928.
- Flotation reagents. By C. S. Parsons.
- Anthraxolite near Sudbury, Ont.; Asbestos in northern Ontario; Feldspar in the Sudbury region, Ont.; Graphite in Ontario and Quebec; Lithium minerals in southeastern Manitoba; Canadian soapstone industry. By H. S. Spence.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- Sodium carbonate at Soap lake, British Columbia. By L. H. Cole.
- Recent developments in the gypsum industry in British Columbia. By L. H. Cole.
- Manitoba as a mining province. By A. H. A. Robinson.
- The limestones of Nova Scotia and New Brunswick, preliminary report on. By M. F. Goudge.
- The limestones of Gaspé peninsula, preliminary report on. By M. F. Goudge.
- The limestones of Timiskaming district, Ontario, preliminary report on. By M. F. Goudge.
- Notes on the quicksilver occurrences in Canada. By V. L. Eardley-Wilmot.
- Notes on the occurrences, metallurgy, and uses of quicksilver. By V. L. Eardley-Wilmot.
- Granite paving blocks. By C. H. Freeman.
- The asbestos industry in Canada. By C. H. Freeman.
688. Investigations in ore dressing and metallurgy, 1926. 130 pp., 5 pls. By W. B. Timm and associates, 1928.
689. Investigations of fuels and fuel testing, 1926. 132 pp., 7 pls., 16 figs., 41 tables, 1928.
- 689-1. Solid fuels—
- Instructions for burning coal, coke, and peat. By E. S. Malloch and C. E. Baltzer.
- Low-temperature carbonization—continuation of tests on Canadian bituminous coals. By R. A. Strong.
- A study of the nature of sulphur in Canadian coal and coke. By J. H. H. Nicolls.
- Air-drying of Canadian lignite, and the re-absorption of moisture by the same. By J. H. H. Nicolls.
- Analyses of solid fuels. Compiled by J. H. H. Nicolls.
- 689-2. Liquid fuels—
- Gasoline survey for 1926. By P. V. Rosewarne and A. F. Gill.
- Report of experiments on the dehydration of bitumen emulsion from Alberta bituminous sands. By P. V. Rosewarne and G. P. Connell.
- Oil shale from Rosevale, New Brunswick. By A. A. Swinnerton.
- Report on the Pritchard process for the distillation of oil shale. By R. E. Gilmore and A. A. Swinnerton.
- Canadian oil shale, and bitumen from bituminous sands, as sources of gasoline and fuel oil, by pressure cracking. By R. E. Gilmore, P. V. Rosewarne, and A. A. Swinnerton.
690. Investigations in ceramics and road materials, 1926. 70 pp., 1 fig., 1928.
- Brick sizes in Canada. By Howells Fréchette.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- Methods of using barium for scum-prevention in stiff-mud brick. By L. P. Collin.
- Manufacture of grey brick. By L. P. Collin.
- Refractoriness of moulding sand. By J. F. McMahon.
- Kaolin and associated clays of Punk island. By L. H. Cole and J. F. McMahon.
- Commercial crushed stone, Ontario and Quebec. By R. H. Picher.
- Stone and its use in road construction. By R. H. Picher.
- *691. Diatomite: its occurrence, preparation, and uses. 182 pp., 15 pls., 31 figs., 17 tables, 1 map—No. 692. By V. L. Eardley-Wilmot, 1928.
694. Investigations of mineral resources and the mining industry, 1927. 60 pp., 11 pls., 7 figs., 8 tables, 1929.
Bituminous sands of northern Alberta—experimental drilling and paving operations, 1927. By S. C. Ells.
695. Investigations in ore dressing and metallurgy, 1927. 186 pp., 6 pls., 1 fig. By W. B. Timm and associates, 1929.
696. Investigations of fuels and fuel testing, 1927. 107 pp., 10 pls., 9 figs., 35 tables, 1929.
- 696-1. Solid fuels—
The use of gas and by-product cokes for domestic heating purposes. By E. S. Malloch and C. E. Baltzer.
Coking tests on coals from western Canada. By R. E. Gilmore and R. A. Strong.
1. Box coking tests in commercial by-product ovens.
2. Laboratory by-product carbonization tests.
Low-temperature carbonization—continuation of tests on Canadian bituminous coals. By R. A. Strong.
Analyses of solid fuels. Compiled by J. H. H. Nicolls.
- 696-2. Liquid fuels—
Gasoline survey for 1927. By P. V. Rosewarne and R. J. Offord.
The assay of bituminous sands. By R. E. Gilmore, A. A. Swinnerton, and G. P. Connell.
1. Tentative methods for the determination of the bitumen in bituminous sands, and the sulphur contents of the bitumen.
2. Carbon disulphide versus benzol as solvents in respect to sulphur in the bitumen.
3. Comparison of laboratory extraction and distillation methods for the subsequent examination of the bitumen.
697. Investigations in ceramics and road materials, 1927. 80 pp., 1929.
An investigation on the treatment of certain western clays to overcome drying defects. By Howells Fréchette and J. G. Phillips.

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NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- Preliminary report on clay gathering. By J. F. McMahon.
- Clays and shales of the Grand Lake area, N.B. By Howells Fréchette.
- Road materials in Prince Edward Island. By R. H. Picher.
- Stone quarries in Quebec. By R. H. Picher.
- The testing of non-bituminous road materials. By R. H. Picher. Published separately as No. 697-1.
698. Industrial fuel and power statistics, calendar year 1925. 23 pp., 12 figs. By E. S. Malloch and C. E. Baltzer, 1928.
- (E) 699. Abrasives: Products of Canada, technology and application.
- (F) *700. Part IV: Artificial abrasives and manufactured abrasive products and their uses. 123 pp., 19 pls., 14 figs., 11 tables. By V. L. Eardley-Wilmot, 1929.
701. Mica. 142 pp., 21 pls., 1 chart, 10 figs., 16 tables, 2 maps—Nos. 703 and 704. By H. S. Spence, 1929.
705. Comparative tests of various fuels when burned in a domestic hot-water boiler. 92 pp., 5 pls., 6 charts, 6 figs., 10 tables. By E. S. Malloch and C. E. Baltzer, 1929.
706. Comparison of cost and convenience of house heating with various fuels. 8 pp., 1 fig. By E. S. Malloch, 1929.
- (E) *707. Chrysotile asbestos in Canada. 146 pp., 34 pls., 8 figs., 6 charts. By J. G. Ross, 1931.
- (F) 708.
710. Investigations of mineral resources and the mining industry, 1928. 53 pp., 2 pls., 5 figs., 1930.
- Preliminary report on the limestones of northern and western Ontario and of the Prairie Provinces. By M. F. Goudge.
- Potash salts in the Maritime Provinces of Canada. By L. H. Cole.
- Core drilling bituminous sands of northern Alberta. By S. C. Ells.
- Preliminary report on moulding sands in eastern Canada. By C. H. Freeman.
711. Investigations in ore dressing and metallurgy, 1928. 166 pp., 7 figs. By W. B. Timm and associates, 1930.
712. Investigations of fuels and fuel testing, 1928. 71 pp., 2 pls., 4 figs., 1930.
- Preliminary carbonization and briquetting tests on lignite from northern Ontario. By R. A. Strong.
- Report on oil-shale from Pictou county, Nova Scotia. By A. A. Swinnerton.
- Laboratory notes. By J. H. H. Nicolls.
- (1) Under-water storage of Saskatchewan lignite.
 - (2) Effects of prolonged weathering on the friabilities of certain coals.
 - (3) Observations concerning organic and other forms of sulphur in coals containing large amounts of sulphur.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- Analyses of coals and other solid fuels. Compiled by J. H. H. Nicolls and C. B. Mohr.
Gasoline survey for 1928. By P. V. Rosewarne and R. J. Offord.
713. Mining laws of Canada. (Revised edition.) 1931.
714. The gypsum industry of Canada. 164 pp., 20 pls., 23 figs., 5 tables, 1 map—No. 715. By L. H. Cole, 1930.
716. The salt industry of Canada. 116 pp., 15 pls., 31 figs., 13 tables, 2 maps—Nos. 717 and 718. By L. H. Cole, 1930.
719. Investigations of mineral resources and the mining industry, 1929. 69 pp., 5 pls., 7 figs., 1930.
The Wilberforce radium occurrence. By H. S. Spence and R. K. Carnochan.
Notes on anhydrite. By L. H. Cole and R. A. Rogers.
Bituminous sands of northern Alberta—operations during 1929. By S. C. Ells.
Limestone in industry. By M. F. Goudge.
Preliminary report on the limestones of British Columbia. By M. F. Goudge.
720. Investigations in ore dressing and metallurgy, 1929. 208 pp., 1 pl., 3 figs. By W. B. Timm and associates, 1931.
721. Investigations of fuels and fuel testing, 1929. 131 pp., 8 pls., 8 figs., 1932.
Report of tests on Sydney coal in the Illingworth low-temperature carbonization retort. By R. A. Strong and E. J. Burrough. Published separately as No. 721-1.
Notes on methods for the laboratory assay of coals for carbonization and coking properties. By R. E. Gilmore.
(1) Comparison of low-temperature carbonization results by the "lead bath" and the Gray-King methods.
(2) Relation of caking indices and agglutinating values of coals to their laboratory and plant scale coking properties.
Caking indices of typical Canadian coking coals. By J. H. H. Nicolls.
Analyses of coals and other solid fuels. Compiled by J. H. H. Nicolls and C. B. Mohr.
Gasoline survey for 1929. By P. V. Rosewarne and H. McD. Chantler. Published separately as No. 721-2.
The analysis of natural gas from the Turner Valley field in Alberta. By P. V. Rosewarne and R. J. Offord. Published separately as No. 721-3.
722. Investigations in ceramics and road materials, 1928-29. 143 pp., 3 pls., 18 figs., 1931.
Ceramic bodies for electrical heating devices. By L. P. Collin.

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NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- Transverse strength of ball clay-sand and ball clay-flint mixtures. By L. P. Collin.
- Production of grey brick. By L. P. Collin.
- Clays and shales of Prince Edward Island. By Howells Fréchette and J. F. McMahon.
- Progress report on clay gathering. By J. F. McMahon.
- The continuation of the investigation of the treatment of clays to overcome drying defects. By J. G. Phillips.
- Plant trials to overcome drying difficulties. By J. G. Phillips.
- Road materials in Prince Edward Island. By R. H. Picher.
- Road gravels in Quebec. By R. H. Picher.
- Lime treatment for gumbo roads. By J. G. Phillips.
- 723.** Investigations of mineral resources and the mining industry, 1930. 82 pp., 5 pls., 2 figs., 1931.
- Bituminous sands of northern Alberta, operations during 1930. By S. C. Ells. Published separately as No. 723-1.*
- Possible industrial applications for bentonite. By H. S. Spence and Margaret Light. Published separately as No. 723-2.*
- Petroleum and natural gas in eastern Canada. By E. H. Wait.
- Diatomite—a general description of its character and industrial uses. By V. L. Eardley-Wilmot.
- The possibilities and prospects for the utilization of Canadian-produced copper in home manufacturing industries. By A. H. A. Robinson and W. H. Losee.
- 724.** Investigations in ore dressing and metallurgy, 1930. 215 pp., 1 pl. By W. B. Timm and associates, 1932.
- 725.** Investigations of fuels and fuel testing, 1930 and 1931. 166 pp., 3 $\frac{1}{2}$ pls., 17 figs., 4 charts, 1933.
- Summary of tests on British Columbia coals when used as pulverized fuel. By E. S. Malloch. Published separately in No. 725-3.
- Notes on pulverized fuel fired steam generators versus other types. By B. F. Haanel. Published separately in No. 725-3.
- Results of twenty-eight hand- and stoker-fired boiler trials made with various fuels on a patented grate. By E. S. Malloch and C. E. Baltzer. Published separately in No. 725-3.
- Classification of coals using specific volatile index. By E. J. Burrough, E. Swartzman, and R. A. Strong. Published separately as No. 725-2.
- Analyses of solid fuels. Compiled by J. H. H. Nicolls and C. B. Mohr. Published separately as No. 725-4.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- Analyses of natural gas during 1930 and 1931. By P. V. Rosewarne and R. J. Offord. Published separately in No. 725-5.
- Weathering of crude naphtha in Turner Valley. By P. V. Rosewarne and W. P. Campbell. Published separately in No. 725-5.
- Experiments on the hydrogenation of Alberta bitumen and on the effect of pressure on the pyrolysis of methane. By T. E. Warren. Published separately as No. 725-1, and also in No. 725-5.
- (1) Hydrogenation and pressure-cracking experiments on Alberta bitumen for the production of motor fuel.
 - (2) The effect of pressure on the pyrolysis of methane.
- Report on oil shales from New Glasgow area, Pictou county, Nova Scotia, and from Port Daniel, Bonaventure county, Quebec. By A. A. Swinnerton. Published separately in No. 725-5.
- Gasoline surveys for 1930 and 1931. By H. McD. Chantler. Published separately in No. 725-5.
- 726.** Investigations in ceramics and road materials, 1930 and 1931. 175 pp., 1 pl., 28 figs., 1933.
- Ceramic bodies for electrical heating devices. By L. P. Collin.
- Colour control of bricks. By L. P. Collin.
- Roofing-tile clays and shales of eastern Canada. By J. F. McMahon.
- The production of shapes from soapstone dust. By J. G. Phillips.
- The continuation of the investigation of the treatment of clays to overcome drying defects. By J. G. Phillips.
- Road gravels in Quebec. By R. H. Picher.
- *727.** Investigations of mineral resources and the mining industry, 1931. 153 pp., 36 pls., 7 figs., 1932.
- *The suitability of certain Canadian sands for use in sandblasting. By L. H. Cole, R. K. Carnochan, and W. E. Brissenden. Published separately as No. 727-1.
- Helium in Canada from 1926 to 1931. By P. V. Rosewarne and R. J. Offord. Published separately as No. 727-2.
- *The pitchblende and silver discoveries at Great Bear Lake, Northwest Territories. By H. S. Spence. Published separately as No. 727-3.
- (a) Radium-bearing minerals from Great Bear Lake, Northwest Territories.
 - (b) Occurrences of pitchblende and silver ores at Great Bear Lake, Northwest Territories.
 - (c) Final report on field investigations during 1931, in LaBine Point area, Northwest Territories.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- Raw materials for the manufacture of rock wool in the Niagara peninsula, Ontario. By M. F. Goudge.
- Exploration of bituminous sand areas in northern Alberta. By S. C. Ells.
- Recent progress in the commercial separation of bitumen from bituminous sand. By S. C. Ells.
- Estimated cost of producing solid and liquid hydrocarbons from bituminous sand. By S. C. Ells.
- Quartzite from Sunnybrae, Pictou county, Nova Scotia. By L. H. Cole and J. F. McMahon.
728. Investigations in ore dressing and metallurgy, 1931. 183 pp., 2 pls., 4 figs. By W. B. Timm and associates, 1932.
729. The clay and shale resources of Turner Valley and nearby districts. 126 pp., 8 pls., 29 figs. By W. G. Worcester, 1932.
- *730. Gold in Canada. 92 pp., 8 figs. By A. H. A. Robinson, 1932.
731. Feldspar. 145 pp., 13 pls., 23 figs. By H. S. Spence. 1932.
732. Anhydrite in Canada: occurrence, properties, and utilization. 89 pp., 5 pls., 9 figs. By L. H. Cole and R. A. Rogers, 1933.
733. Canadian limestones for building purposes. 196 pp., 40 pls., 11 figs. By M. F. Goudge, 1933.
- *734. Gold in Canada, 1933. 92 pp., 8 figs. By A. H. A. Robinson, 1933.
735. Investigations of mineral resources and the mining industry, 1932. 31 pp., 1 pl., 5 figs., 1934.
Silica deposit near Gatineau Point, Quebec. By L. H. Cole and R. K. Carnochan.
Sandstone at Hawkesbury, Ontario. By L. H. Cole.
Some economic aspects of the bituminous sands of northern Alberta. By S. C. Ells.
736. Investigations in ore dressing and metallurgy, 1932. 287 pp., 2 pls., 14 figs. By W. B. Timm and associates, 1934.
737. Investigations of fuels and fuel testing, 1932. 155 pp., 7 pls., 10 figs., 8 charts, 1934.
General review of investigations. By B. F. Haanel and R. E. Gilmore.
Anthracite and coke analysis survey conducted at the Fuel Research Laboratories. Published separately as No. 737-5.*
The F. R. L. method for rating the grindability or pulverizability of coal, correlated with the "Cross" and "Hardgrove" methods. By C. E. Baltzer and H. P. Hudson. Published separately as No. 737-1.
A laboratory test on coals for predicting the physical properties of the resultant by-product cokes. By E. Swartzman, E. J. Burrough, and R. A. Strong. Published separately as No. 737-2.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

Changes in forms of sulphur in coal under various conditions of weathering. By J. H. H. Nicolls and E. Swartzman.

Batch experiments on the hydrogenation and cracking of low-temperature coal tar. By T. E. Warren and A. R. Williams. Published separately as No. 737-3.*

Description of an apparatus for continuous hydrogenation experiments on coal tar, bitumen, and a suspension of powdered coal in coal tar. By T. E. Warren and K. W. Bowles. Published separately as No. 737-3.*

A study of the natural gas and naphtha products from twenty-four wells in Turner Valley, Alberta. By P. V. Rosewarne, W. P. Campbell, and R. J. Offord. Published separately as No. 737-4.

Gasoline survey for 1932. By H. McD. Chantler.

(E) 738. Mineral industries of Canada, 1933. 116 pp., 34 pls., 1 map—

(F) 739. No. 702. 1934.

742. Limestones of Canada, Part II: Maritime Provinces. 186 pp., 29 pls., 12 figs., 2 maps—Nos. 740 and 741. By M. F. Goudge, 1934.

743. Investigations in ore dressing and metallurgy, January to June, 1933. 157 pp., 4 pls., 5 figs. By W. B. Timm and associates, 1934.

744. Investigations in ore dressing and metallurgy, July to December, 1933. 194 pp. By W. B. Timm and associates, 1934.

*745. The use of petroleum fuels in Canada: deliveries for consumption, calendar years 1930-31-32. 11 pp. By J. M. Casey, 1934.

746. Gasoline survey for 1933. 21 pp., 1 fig. By H. McD. Chantler, 1934.

747. Investigations in ore dressing and metallurgy, January to June, 1934. 209 pp., 1 fig. By W. B. Timm and associates, 1935.

748. Investigations in ore dressing and metallurgy, July to December, 1934. 202 pp., 2 pls., 3 figs. By W. B. Timm and associates, 1935.

(E) 749. Mineral industries of Canada, 1933. (Abridged.) 39 pp.

(F) 750. By A. H. A. Robinson, 1934.

(E) 751. Road gravels in Quebec. 214 pp. By R. H. Picher, 1935.

(F) 752.

753. Analyses of coals and other solid fuels, 1932, 1933, and 1934. 58 pp. Compiled by J. H. H. Nicolls and C. B. Mohr, 1935.

754. A study of clay winning and its costs in the provinces of Ontario and Quebec. 90 pp., 19 pls., 3 figs. By J. F. McMahon, 1935.

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- 774 - Investigations in Ore Dressing and Metallurgy, January to June, 1936.
- 775 - Fuel Briquetting, by R.A.Strong. E. Swartzman and E.J.Burrough.
- 776 - Investigations in Ore Dressing and Metallurgy, July to December, 1936.
- 777 - Catalogue of Bureau of Mines publications.
- 779 - Analysis of coals and other solid fuels 1934 to 1936.
- 780 - Petroleum Fuels in Canada, Deliveries for consumption, 1935, by J.M.Casey.
- 781 - Limestones of Canada, Part IV - Ontario, by M.F.Goudge.
- 785 - Investigations in Ore Dressing and Metallurgy, January to June, 1937.
- 786 - The Canadian Mineral Industry in 1936.
- 787 - Gasoline Surveys for 1935 and 1936.
- 788 - Investigations in Ore Dressing and Metallurgy, July to December, 1937.
- 789 - Petroleum Fuels in Canada, Deliveries for consumption, 1936, by J.M.Casey.
- 790 - Comparative pulverized fuel boiler tests on British Columbia and Alberta coals and on Ontario Lignite.
- 791 - The Canadian Mineral Industry in 1937. (out of print)
- 792 - Investigations in Ore Dressing and Metallurgy, January to June, 1938.
- 793 - Improving the properties of Clays and Shales, by J.G.Phillips.
- 794 - Petroleum Fuels in Canada, Deliveries for consumption, 1937 by J.M.Casey.
- 795 - The Mining Laws of Canada.
- 796 - Gasoline surveys for 1937 and 1938.
- 797 - Investigations in Ore Dressing and Metallurgy, July to December, 1938.
- 798 - Tests on the Liquefaction of Canadian coals by hydrogenation by T.E.Warren and K.W.T. Bowles.
- 799 - Mineral Map of Canada.
- 800 - Stabilized Roads, by R.H.Picher.
- 802 - Comparative tests of various fuels when burned in a domestic hot-water boiler by C.E.Baltzer and E.S.Malloch.
- 803 - Talc, Steatite and Soapstone, Pyrophyllite, by H.S.Spence.
- 804 - The Canadian Mineral Industry in 1938.
- 805 - Investigations in Ore Dressing and Metallurgy, January to June, 1939.
- 806 - Investigations in Ore Dressing and Metallurgy, July to December. 1939,

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- 65 - Analysis of some fuel oil sold in Canada.
- 66 - Industrial waters of Canada. Interim Report No.2 by H.A.Leverin (out of print).
- 67 - What Canada is doing in steel by A.W.G.Wilson.
- 68 - Industrial waters of Canada. Interim Report No. 3, by H. A. Leverin.
- 69 - The Concentration of Canadian Molybdenite ores.
- 70 - Grindability indices of typical Canadian and other coals and the relation of grindability to friability.
- 71 - Fusion Point of Coal ash determinations.
- 72 - Industrial waters of Canada. Interim Report no. 4, by H. A. Leverin.
- 73 - Summary of tests on three domestic type wood burning hot-water boilers.
- 74 - Physical and Chemical survey of coals from Canadian Collieries - Nova Scotia - Inverness County Coalfield.
- 75 - A preliminary report on Brucite deposits of Ontario and Quebec and their commercial possibilities, by M. F. Goudge. (Out of print).
- 76 - Peat Moss in New Brunswick. A survey of areas offering industrial possibilities by H.A.Leverin.
- 77 - Industrial waters of Canada. Interim Report No.5 by H. A. Leverin.
- 78 - Physical and Chemical survey of coals from Canadian Collieries - Nova Scotia - Cumberland County Coalfield.
- 79 - Physical and Chemical survey of coals from Canadian Collieries - Nova Scotia - Pictou County Coalfield.
- 80 - Peat Moss Deposits in Eastern Canada, by H. A. Leverin.

- (E) 755. Limestones of Canada, their occurrence and characteristics,
 (F) 758. Part III: Quebec. 274 pp., 36 pls., 13 figs., 2 maps—Nos.
 756 and 757. By M. F. Goudge, 1935.
759. Petroleum fuels in Canada, deliveries for consumption,
 calendar year 1933. 12 pp. By J. M. Casey, 1935.
- *760. The Canadian mineral industry, 1934. 119 pp., 1935.
761. Wood fuel burning tests. 6 pp., 1 pl., 1 fig. By E. S. Malloch
 and C. E. Baltzer, 1935.
762. Coal friability tests: a comparative study of methods for
 determining the friability of coal, and suggestions for
 tumbler and drop shatter test methods. Appendices:
 I—Tumbler test for coal; II—Drop shatter test for coal.
 102 pp., 4 pls., 9 figs. By R. E. Gilmore, J. H. H. Nicolls,
 and G. P. Connell, 1935.
763. Investigations in ore dressing and metallurgy, January to
 June, 1935. 237 pp., 1 pl. By W. B. Timm and as-
 sociates, 1936.
764. Gasoline survey for 1934. 22 pp., 1 fig. By H. McD.
 Chantler, 1935.
765. Analyses of Canadian crude oils, naphthas, shale oil, and bitu-
 men. 21 pp., 2 pls., 3 figs. By P. V. Rosewarne, H. McD.
 Chantler, and A. A. Swinnerton, 1936.
766. Laboratory tests on structural assemblies of brick and tile.
 33 pp., 2 pls., 1 fig. By L. P. Collin, 1935.
- (E) 767. Natural bonded moulding sands of Canada. 144 pp., 11 pls.,
 (F) 768. 7 figs. By C. H. Freeman, 1936.
- (E) 769. Gold in Canada, 1935. 127 pp., 7 figs. By A. H. A. Robinson,
 (F) 770. 1935.
771. Investigations in ore dressing and metallurgy, July to De-
 cember, 1935. 235 pp. By W. B. Timm, and associates,
 1937.
772. Petroleum fuels in Canada, deliveries for consumption, cal-
 endar year 1934. 20 pp. By J. M. Casey, 1936.
773. The Canadian mineral industry, 1935. 100 pp.

MEMORANDUM SERIES

The following reports and articles have been issued in mimeographed form by the Mines Branch:—

- *1. Alkali deposits of western Canada. January, 1921. (Published in Rept. No. 588, Investigations of mineral resources and technology, 1921.)
- *2. Oil shales of Manitoba and Saskatchewan. November, 1921. (Published in Rept. No. 588, Investigations of mineral resources and technology, 1921.)
- *3. Cretaceous shales of Manitoba and Saskatchewan as a possible source of crude petroleum. December, 1921. (Published in Rept. No. 588, Investigations of mineral resources and technology, 1921.)

Publications marked thus () are out of print.

NOTE.—The letters (E) and (F) placed before publication numbers denote the English and French editions respectively.

- *4. A new source of soapstone in Ontario. April, 1922. (Published in Rept. No. 607, Investigations in mineral resources and technology, 1922.)
- 5. Pottery clays in Canada. (Revised, 1935.)
- *6. British market for Canadian non-metallic minerals. December, 1922.
- *7. Directory of Belgian buyers of metals and minerals. December, 1922.
- *8. Directory of British buyers of metals and minerals. December, 1922.
- 9. Investigation of the economic value of a fossil resin from British Columbia. November, 1922. (Published in Rept. No. 607, Investigations in mineral resources and technology, 1922.)
- 10. Recovery of petroleum by shafts and galleries at Pechelbronn, France, and at Wietz, Germany. February, 1924.
- 11. Selective flotation as applied to Canadian ores. March, 1924. (Published in Rept. No. 617, Investigations in ore dressing and metallurgy, 1923.)
- *12. Work and organization of the Mines Branch. November, 1922.
- *13. Deschenes refinery of the British America Nickel Corporation. February, 1922.
- *14. List of graphite consumers in Canada.
- *15. The selective flotation of the lower grade nickeliferous pyrrhotite ores of Ontario. April, 1924. (Published in Rept. No. 617, Investigations in ore dressing and metallurgy, 1923.)
- *16. Experimental tests on the beneficiation of Canadian iron ores. April, 1924. (Published in Rept. No. 617, Investigations in ore dressing and metallurgy, 1923.)
- 17. The Lake George antimony ores and their concentration. September, 1924. (Published in Rept. No. 643, Investigations in ore dressing and metallurgy, 1924.)
- *18. Gasoline survey for 1924. January, 1925. (Published in Rept. No. 644, Investigations of fuels and fuel testing, 1924.)
- 19. Methods of sampling coal deliveries. February, 1925.
- 20. The goldfields of western Quebec. February, 1925. Published in Rept. No. 642, Investigations of mineral resources, 1924.)
- 21. Concentration of the lead-zinc ores of eastern Canada. March, 1925.
- *22. The concentration of Canadian molybdenite ores. July, 1925.
- 23. Gasoline survey for 1925. September, 1925.
- *24. Selected list of books for the brick yard office. January, 1926.
- 25. The concentration of flake graphite ore. February, 1926.
- *26. Ceramic testing and research laboratories, Ottawa. February, 1926.
- 27. Gravel and gravel roads. May, 1936.
- (F)27a.
- 28. Gasoline survey for 1926. November, 1926.
- *29. Selective flotation as applied to Canadian ores (II). March, 1927.
- 30. Analyses of some samples of coke sold in Canada. May, 1927.
- 31. Gasoline survey for 1927. April, 1928.
- 32. The ore testing and research laboratories, Mines Branch, Ottawa. April, 1928.

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33. Preliminary report on an investigation of the treatment of certain western clays to overcome drying defects. April, 1928.
34. New fuel research laboratory. October, 1928.
35. Gasoline survey for 1928. December, 1928.
36. Some coal research problems in Canada. February, 1929.
37. Coke as a fuel for domestic purposes. March, 1929.
38. New pyrometallurgical laboratory for test and research on iron and steel. April, 1929.
39. A story of gasoline. May, 1929.
40. Notes on beryllium and beryl. April, 1930.
41. The clays of Canada. September, 1930.
42. Motor fuel survey of Alberta for 1930. October, 1930.
43. Summary report of analysis of natural gas from Turner Valley field in Alberta. December, 1930.
44. Ceramic Testing and Research Laboratories, Ottawa.
45. Gasoline survey for 1930. January, 1931.
- *46. Impressions of the mineral industries of British South Africa.
47. Advances made in recent years in the metallurgy of gold including improved processes and equipment.
48. Radium-bearing minerals from Great Bear Lake, N.W.T.
49. Lubrication of the gasoline engine.
50. Raw materials for the manufacture of rock wool in the Niagara peninsula of Ontario.
51. Occurrences of pitchblende and silver ore at Great Bear Lake, N.W.T. October, 1931.
52. Status of hydrogenation of petroleum, bitumen, coal tar, and coal. January, 1932.
53. A world survey of recent oil shale developments. January, 1932.
54. The semi-direct production of nickel steel from Sudbury ore. March, 1932.
- *55. A classification of coal for use in the by-product coking industry. March, 1932.
56. Summary of tests on British Columbia coals when used as pulverized fuel. August, 1932.
57. Refractory clays in Canada. September, 1932.
58. The Mineragraphic Laboratory, Mines Branch. February, 1933.
59. Zinc dust consumption at Canadian gold mines. April, 1933.
60. Gasoline survey for 1932. July, 1933.
61. Zinc dust consumption at Canadian gold mines (1931-1932-1933). May, 1934.
62. Characteristics of rock wool experimentally prepared from rock available in the St. David's-Thorold district of Ontario. August, 1934.
63. Analyses of samples of natural gas from Ontario in 1932 and 1933. July, 1934.
64. Industrial waters of Canada, Interim Report No. 1, 1936.

Publications marked thus () are out of print.

LISTS OF MINES AND METALLURGICAL PLANTS

The following lists of metallurgical works, milling plants, metal and non-metal mine operators, coal mine operators, etc., are published from time to time by the Mines Branch:—

1-1. Metallurgical works—

- I. Iron and Steel.
- II. Non-ferrous and precious metals.

1-2. Milling plants—

- I. Metallic ores.
- II. Non-metallic ores.

Metal Mines:

- 2-1. Gold mines.
- 2-2. Silver mines.
- 2-3. Copper and copper-nickel mines.
- 2-4. Silver-lead-zinc mines.
- 2-5. Iron mines.
- 2-6. Molybdenum, antimony, and tungsten mines.

Non-metal Mines:

3-1. Abrasives—

- Corundum
- Grindstone (sandstone)
- Diatomite
- Garnet
- Volcanic dust
- Pebbles and quartz sand.

- 3-2. Asbestos.
- 3-3. Feldspar.
- 3-4. Graphite.
- 3-5. Gypsum.
- 3-6. Magnesium and sodium sulphates, and sodium carbonate.
- 3-7. Mica.
- 3-8. Mineral pigments—
 - Barite.
 - Iron oxides.
 - Manganese.
- 3-9. Quartz (silica).
- 3-10. Salt wells and mines in Canada.
- 3-11. Talc and soapstone.

3-12. Miscellaneous non-metals—

Actinolite	Lepidolite
Apatite	Magnesite
Arsenic	Mineral water
Bentonite	Natro-alunite
Calcite	Peat
Chromite	Phosphate
Dolomite, crystalline	Pyrites
Fluorspar	Strontium
Fuller's earth	Whiting.

4-1. Coal mines in Canada.

4-2. Producers of coke in Canada.

5. Natural gas and petroleum wells.

6. Structural materials—

6-1. Cement mills.

6-2. Sand-lime brick plants.

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1913.....	37	R	285
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Tests on ore from**Alberta**

McLeod River m.....	60-62	R	728
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British Columbia

Alberni.....	32-34	R	688
Alexandria m.....	50-53	R	736
Alice Lake gp.....	53-58	R	736
Ashloo m.....	175-181	R	763
Atlin Pacific m.....	11-16	R	763
Bayonne Consolidated m.....	182-189	R	763
B.C. Cariboo Gold Fields m.....	7-9	R	747
Bear r. (near), Vancouver is.....	147-154	R	605
Belmont Surf Inlet m.....	21-24	R	617
Bradian m.....	170-174	R	763
Bralorne m.....	62-68	R	728
	69-71	R	736
Bullion m.....	61-62	R	542
Bunker Hill cls.....	79-82	R	688
Cariboo dist.....	13-15	R	736
Cariboo Gold Quartz m.....	66-69	R	736
Centre Star m.....	42-55	R	771
Chapleau m.....	97-102	R	763
Columario m.....	132-135	R	743
Columbia-Kootenay m.....	12-13	R	617
Contact m.....	58-63	R	670
Dentonia m.....	101-106	R	743
Dunwell m.....	3-6	R	688
Engineer m.....	3-5	R	763
Gold Fern m.....	30-35	R	771
Gold Rand Mineral cl.....	16-19	R	736
Grandoro m.....	72-76	R	748
Hedley Mascot m.....	179-190	R	748
Home m.....	100-106	R	744
Howard m.....	60-63	R	747
Island Mountain m.....	6-15	R	748
J. & L. m.....	13-15	R	688

Gold—Continued

Tests on ore from—Continued

British Columbia—Concluded

Kalamalka m.....	81-86	R	771
Kilno m.....	95-105	R	748
Kitsalas Mountain m.....	127-135	R	605
Kootenay Belle m.....	74-76	R	743
Le Roi No. 2 m.....	178-180	R	605
Mamie gp.....	162-169	R	771
Marysville m.....	126-133	R	748
Meridian m.....	129-132	R	744
Minto m.....	61-71	R	748
Monashee m.....	171-178	R	748
Mount Evelyn m.....	16-27	R	688
New Hazelton m.....	71-74	R	493
	121-126	R	509
	56-58	R	542
North Bend.....	96-97	R	736
Omineca m.....	170-174	R	771
Ophir Lode m.....	46-48	R	617
Osoyoos m.....	23-29	R	771
Perrier m.....	53-58	R	720
Planet m.....	29	R	695
Premier m.....	73-82	R	695
Queen m.....	53-60	R	748
Relief Arlington m.....	134-140	R	771
Reno m.....	115-118	R	695
	93-102	R	728
	152-158	R	748
Rock Creek placer.....	143-144	R	736
Rossland Velvet m.....	8-12	R	617
Second Relief m.....	58-62	R	711
Silver Creek gp.....	162-169	R	771
Sproat l. (near).....	55-58	R	643
Sunset and Motherlode m.....	141-151	R	748
Surf Point m.....	165-170	R	736
Tamarac m.....	2-3	R	743
Tatlayoco Lake dist.....	22-24	R	744
Taylor Windfall m.....	107-113	R	771
Teddy Glacier m.....	211-212	R	736
Vidette Lake m.....	103-107	R	728
	145-148	R	744
Wayside m. (Bridge River dist.).....	132-146	R	763
Whitewater m.....	170-171	R	736
	207-213	R	763
Windpass m.....	24-46	R	643
Yankee Girl m.....	99-109	R	736
	143-150	R	743

Manitoba

Bingo m.....	94, 96-99	R	542
	27	R	574
Central Manitoba m.....	127-139	R	720
Dominion cls.....	62-67	R	643
Elbow l.....	89-90	R	744
English Brook dist.....	84-86	R	688
	164-169	R	724
Gem Lake m.....	58-64	R	720
God's Lake Gold m.....	117-125	R	748
	199-213	R	771
Gunnar Gold m.....	161-169	R	763
Gunville cls.....	126-128	R	744
Herb Lake.....	59-60	R	736

Gold—Continued**Tests on ore from—Continued****Manitoba—Concluded**

Highland-Enterprise m.....	138-143	R	736
Island Lake prop.....	144-156	R	736
Kitchener m.....	72-79	R	688
Laguna m.....	184-187	R	771
Little Rice l. (near).....	29-33	R	574
Lynx prop.....	67-70	R	743
Maskwa m.....	48-53	R	744
North Star cls.....	30-33	R	743
Oxford l.....	62-64	R	711
Pan Extension m.....	186-190	R	586
Rex m.....	58-61	R	643
Rice Lake m.....	50-52	R	748
San Antonio m.....	116-122	R	724

New Brunswick

Bathurst	80-86	R	617
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Northwest Territories

Burwash Yellowknife m.....	200-206	R	763
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Nova Scotia

Boston-Richardson m.....	56-59	R	744
Brookfield m.....	135-145	R	724
County Harbour m.....	65-69	R	724
Cranberry head.....	24-46	R	617
	4-11	R	743
Dufferin m.....	28-29	R	747
E. H. Gladwin m.....	160-162	R	605
Evangeline Gold m.....	69-71	R	720
Hants Gold m.....	37-40	R	743
Herman Hall m.....	158-160	R	605
Lacey Gold m.....	56-67	R	771
Montague m.....	71-78	R	747
Mt. Uniacke and Goldenville m.....	171-172	R	605
Seal Harbour m.....	214-219	R	771
Skunk Den m.....	29-37	R	748
West Caledonia.....	75-78	R	744
Wine Harbour.....	34-36	R	743

Ontario

Alcona m.....	151-156	R	743
	112-121	R	744
Arbade m.....	156-166	R	747
Argonaut m.....	28-36	R	670
	66-72	R	688
	110-112	R	724
Argosy m.....	141-150	R	771
Ashley m.....	3-6	R	736
Associated Goldfields m.....	53-54	R	643
Beardmore m.....	12-17	R	724
	60-67	R	744
Belledat-Goudreau m.....	71-81	R	720
Bey m.....	116-123	R	736
Bidgood Kirkland m.....	107-111	R	744
Blomfield prop. (Marmora tp.).....	111-112	R	743
Blue Quartz m.....	22-28	R	695
Bousquet m.....	21-28	R	748
British Canadian m.....	13-17	R	720
Buffalo Ankerite m.....	10-12	R	744
Cameron Island m.....	60-63	R	736
	75-79	R	711

Gold—Continued

Tests on ore from—Continued

Ontario—Continued

Canadian Reserve m.....	23-50	R	763
Casey Summit m.....	22-27	R	747
Cedar Island.....	156-165	R	736
Central Patricia m.....	54-64	R	724
	77-80	R	748
Chartered Explorers m.....	94-99	R	744
Cochénour-Willans m.....	12-24	R	743
Cole m.....	90-96	R	763
Cooper m.....	67-73	R	695
Darwin m.....	8-15	R	771
De Santis m.....	20-21	R	736
Dikdik m.....	54-59	R	747
Dome m.....	72-75	R	224
	93-94	R	688
Dryden.....	63-64	R	493
Edwards m.....	10-13	R	747
Gogama (near).....	85-87	R	728
	91-93	R	744
Golden Summit m.....	34-35	R	574
Gold Hill m.....	46-49	R	688
Goudreau-Localsh area.....	94-96	R	720
Grace m.....	10-15	R	711
Guelph m.....	32-33	R	744
Halcrow-Swayze m.....	63-66	R	743
Hard Rock m.....	114-133	R	771
Hayden m.....	68-71	R	728
Horseshoe m.....	130-138	R	736
Howey m.....	17-29	R	720
	5-9, 17-19	R	728
Hudson-Patricia m.....	165-170	R	748
Jackson-Manion m.....	9-13	R	720
Kirkland Gold Belt m.....	79-86	R	744
Kirkland Lake m.....	56-61	R	617
	102-108	R	695
	146-150	R	724
	76-85	R	728
Kirkland Premier m.....	98-102	R	695
Kozak m.....	16-20	R	748
Lac des Mille Lacs m.....	44-48	R	747
Lakeland m.....	37-39	R	744
Lake of the Woods dist.....	109-116	R	736
Laurentian m.....	16-22	R	771
Little Long Lac m.....	122-126	R	743
	117-123	R	747
	127-131	R	763
Long Lake m.....	53-57	R	688
Lucky Coon m.....	49-51	R	643
Macjoe Sturgeon m.....	95-100	R	771
McKellar-Longworth prop.....	35-39	R	736
McKenzie-Red Lake m.....	185-194	R	747
Mackey Point Syndicate.....	204-211	R	736
McMillan m.....	48-53	R	720
McPhee prop. (Sudbury).....	98-99	R	454
McWilliams-Beardmore m.....	4-7	R	771
Manitoba and Eastern m.....	4-6	R	747
	87-89	R	763
Matachewan m.....	13-21	R	744
	167-174	R	747
Michael-Boyle m.....	25-29	R	743
Mikado m.....	133-138	R	744
Miller Bay m.....	11-17	R	728

Gold—Continued**Tests on ore from—Continued****Ontario—Concluded**

Miller Independence m.....	63-70	R	763
Moss m.....	35-43	R	728
Naughton m.....	87-89	R	617
Night Hawk Lake m.....	130-135	R	724
Northern Metals m.....	34-36	R	744
Onaman Lake area.....	40-41	R	744
Pamour Porcupine m.....	188-198	R	771
Parkhill m.....	154-158	R	724
	140-142	R	743
Paymaster Consolidated m.....	51-62	R	763
Pearce m.....	221-225	R	763
Pickle Crow m.....	14-21	R	747
Porcupine Peninsular m.....	81-86	R	748
Red Lake Gold Shore m.....	175-183	R	771
Rochester m.....	175-181	R	747
St. Anthony m.....	84-86	R	720
Sand River Gold m.....	101-104	R	771
Shinintree Gold m.....	87-94	R	771
Straw Lake Beach m.....	73-80	R	771
Sudbury (near).....	133-135	R	509
Summit l.....	150-154	R	724
Swayze-Denyes area.....	136-139	R	743
Sylvanite m.....	4-22	R	695
	66-69	R	720
Tashota m.....	122-129	R	724
	134-140	R	748
Telluride Goldfields m.....	19-26	R	728
Thorneloe m.....	81-86	R	763
Ventures m.....	45-47	R	744
Vimy m.....	71-80	R	763
Wendigo m.....	87-94	R	748
	103-116	R	763
Wright-Hargreaves m.....	71-74	R	643
	37-42	R	695
	50-60	R	728
Young-Davidson m.....	39-42	R	670
	81-100	R	743

Quebec

Archean m.....	109-111	R	695
Arntfield m.....	111-116	R	747
	106-110	R	748
Arrowhead Consolidated m.....	24-29	R	724
Beattie m.....	71-96	R	736
	41-62	R	743
	148-151, 195-203	R	747
	218-220	R	763
Beaufor m.....	87-93	R	728
	185-195	R	736
Bussièrès m.....	71-73	R	743
	204-207	R	747
Canadian Malartic m.....	38-45	R	748
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Canadian Pandora m.....	4-9	R	744
Chibougamau dist.....	44-50	R	728
Dasserat-Rouyn m.....	66-68	R	617
Demara m.....	71-74	R	744
Francoeur prop.....	64-66	R	695
Granada m.....	143-154	R	720
	22-25	R	736
Greene-Stabell m.....	116-127	R	720
	123-130	R	736
	143-147	R	747

Gold—Continued

Tests on ore from—Continued

Quebec—Concluded

Horne m.....	6-13	R	688
<i>See also</i> Noranda m.	6-8	R	711
Lake Aylmer.....	132	R	509
LeRoy Fiedmont m.....	9-11	R	728
LeRoy m.....	71-74	R	728
Malartic m.....	15-23	R	711
<i>See also</i> Canadian Malartic m.	86-93	R	720
Manley m.....	139-144	R	744
McWatters m.....	153-155	R	747
	105-106	R	771
Mooshla m.....	117-126	R	763
Noranda m.....	52-56, 78-81	R	670
Norgold m.....	42-44	R	744
Normont m.....	64-70	R	747
O'Brien m.....	69-80	R	724
Pascal's m.....	49-53	R	747
Pontiac-Rouyn m.....	111-116	R	748
Powell-Rouyn m.....	159-164	R	748
St. Germaine-Gale prop.....	29-32	R	736
Shawkey m.....	214-217	R	763
Siscoe m.....	158-159	R	724
	39-45	R	736
	36-41	R	771
Stadacona Rouyn m.....	46-49	R	748
	151-154	R	771
Sullivan Consolidated m.....	195-204	R	736
	77-80	R	743
	149-152	R	744
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Amisk l.....	138-142	R	747

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1926 (Ontario and Quebec).....	8-11	R	687
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Occurrences examined near Cranbrook, B.C., 1916.....	34, 35	R	454

Tests on ore from

Ontario

Ontario (locality not stated).....	149	R	509
Timmins m.....	112-114	R	605

Quebec

Blake tp., Hull co.....	23-25	R	574
Bryson tp., Pontiac co.....	37	R	574
Buckingham.....	90-95	R	542
	35-40	R	688
	130-131	R	695
	110-117	R	711
Guenette (Canadian Graphite Corp.).....	68-74	R	617
	118-123	R	711
Lachute (near).....	147-149	R	509
Low tp., Hull co.....	69-71	R	542
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British Columbia			
Bull r.....	136-137	R	728
Falkland.....	136	R	695
Canada.....	128-130	R	711
Manitoba			
Amaranth.....	225-228	R	736
Nova Scotia			
Ottawa Brook.....	244-245	R	736
Windsor.....	247-248	R	736
Quebec			
Magdalen is.....	175-176	R	720

Helium

Alberta.....	42-46	R	616
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British Empire.....		R	522
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" (1926-1931).....	42-54	R	727

Hematite

Tests on ore from			
New Brunswick			
Bathurst.....	61-64	R	142
	99-105	R	421
Nova Scotia			
Nictaux-Torbook dist.....	64-68	R	142
Ontario			
Groundhog m., Algoma dist.....	86-105	R	346

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Bitumen, Alberta.....	115-128	R	725
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		R	110
Ontario			
Atikokan and Mattawin dists.....	24-34	R	346
Bessemer m.....	83-86	R	103
Calabogie dist.....		R	254
Central Ontario Railway area.....	112-114	R	63
	95-100	R	142
		R	184
	15-20	R	454
Hastings co.....	55-59	R	28
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Huron mt.....	53-54	R	28
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production from

Moose Mountain concentrate.....	274-276	R	736
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Tests on ore from

British Columbia

Texada is.....	156-158	R	728
	269-273, 276-281	R	736
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Vancouver is.....	112	R	346
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Minnesota Bell m.....	198-200	R	724
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New Brunswick

Bathurst m.....	53	R	63
	61-64	R	142
	99-105	R	421
	125	R	617
	158-160	R	728

Newfoundland (Wabana ores).....	195-198	R	724
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Nova Scotia

Torbrook m.....	64-71	R	142
	126-127	R	617

Ontario

Algoma dist.....	32-35	R	728
Bessemer m.....	58-59	R	224
	87-88	R	454
	128-129	R	617

Childs m.....	60-61	R	224
	129	R	617

Culham m.....	125	R	617
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Culhane m.....	60	R	142
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Goulais River area.....	71-73	R	142
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	127	R	617
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Groundhog m.....	81-89	R	285
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	86-105	R	346
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	130	R	617
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Helen m.....	206-210	R	724
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Kaministiquia.....	74-75	R	493
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	131	R	617
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	29-42	R	720
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Kingston.....	144	R	509
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Lavant tp.....	74-77	R	285
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	78-80	R	346
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Mine Centre.....	178-185	R	720
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	213-218	R	736
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Moose Mountain m.....	113	R	346
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North Pines m.....	120-123	R	346
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Poe m.....	71	R	542
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Port Arthur.....	97-98	R	736
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Robertsville m.....	59	R	142
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Sudbury.....	89-95	R	670
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Wilbur m.....	52-64	R	103
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	123-124	R	617
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Quebec

Aldermac m.....	4-12, 101-110	R	724
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Amulet m.....	132-153	R	711
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Bristol m.....	49-52	R	63
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	82-88	R	711
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Natashkwan.....	76-83	R	142
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British Columbia		
Alberni (near).....	32-34	R 688
Albert Canyon.....	112-115	R 724
Alice Lake gp.....	53-58	R 736
Arrowhead.....	79-83	R 605
Bunker Hill cls.....	79-82	R 688
Confederation gp.....	122	R 695
Dunwell m.....	3-6	R 688
E.G. cls.....	74-82	R 643
Enterprise m.....	23-28	R 670
Giant m.....	82-83	R 688
Homestake m.....	76-78	R 493
	69-74	R 711
Kicking Horse m.....	56-58	R 670
LaRose m.....	57-59	R 688
Mamie gp.....	162-169	R 771
Mammoth m.....	17-22	R 763
Mansfield cls.....	194	R 586
Marysville m.....	126-133	R 748
North Star m.....	117-125	R 586
Omineca Gold Quartz m.....	170-174	R 771
Planet m.....	29	R 695
Premier m.....	73-82	R 695
Ptarmigan m.....	28-29	R 574
Silver Creek gp.....	162-169	R 771
Sullivan m.....	64-67	R 542
	13-17	R 617
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